

# AMERICAN AGRICULTURIST.



*Agriculture is the most healthy, the most useful, and the most noble employment of man.*—WASHINGTON.

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AND  
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## ESPALIERS.

JUDGING from our own experience, and what we have seen of espaliers in the United States, growing fruit trees in this form, as a general rule, may be considered a failure. They do well in the cool, moist climates of Northern Europe, but an American sun is too hot for them. We have often watched the different effects of the sun upon espaliers and standard trees in the same exposure. The espalier presents, with its trained top, little surface to benefit from the copious dews of summer, nor can its leaves usually give much shade to the branches, and none at all to the trunk. Hence, almost immediately after the rising of a clear sun, the little dew on the leaves is absorbed, and the trunk and branches are exposed all day to its fervid heat. Shrivelling of the trunk and branches, cracking of the bark, and various diseases follow, from which the better moistened and shaded standard is entirely free. This presents a large surface to the falling dew, and what is not absorbed by the leaves during the night for the benefit of the tree, is very gradually dissipated by the morning sun. The thick leaves of the top, then, are a protecting shade to the branches and part of the trunk all day; and thus standards are much better guarded from the extremes of heat and cold, of drouth and wet, than espaliers.

## CEMETERY OF THE EVERGREENS.

AT the invitation of Mr. A. P. Cumings, one of the principal directors, and in company with several other gentlemen, we recently made an excursion to this delightful retreat for the dead. The grounds occupy about 212 acres of the highland ridge, and its sloping sides, which form the rear of Brooklyn and Williamsburgh, being distant from Fulton Ferry about five, and from Williamsburgh about three miles. It is in contemplation to add another 100 acres to the premises, which will make the grounds somewhat larger than Greenwood. Most of it is yet in wood and small patches of open land, as left by the former occupants. Yet, in the brief space it has been in the hands of the present managers, it has assumed an air of taste and refinement peculiar to all our recently-arranged rural cemeteries. A beautiful granite, rustic lodge marks the entrance. The approach to it is indicated by a tasteful copse of native trees, on either side of which a slightly circling road ushers one into the broad, graceful avenues which wind and turn in every direction, over hill and dale till one is lost in a labyrinth of rural scenery. On the summit of the ground, and not far from the entrance, is a small chapel in the Norman style, on one side of which a tower rises to the height of 80 feet. To say the view from the top of this is beautiful, would be faint praise. It is not only beautiful, but beautifully grand—magnificent. On one side, Brooklyn, Williamsburgh, Ravenswood, the East River, New York, and the Palisades beyond, are in full view, while on the other, at your feet, lie East New York, and beyond, Jamaica, and still further off are Rockaway and the broad

Atlantic. We noticed the burial place of one little child, only, in this vast receptacle of the future dead. All now is tenantless and forsaken. What a change will a few years witness. Then, the bustling multitudes that now throng our crowded streets, the gay and depressed, the idle and the busy, the rich and the poor, the hopeful and the despairing will all have "shaken off their mortal coil," and noiselessly, one by one, not as now, thronging the abodes of pleasure or of praise, they will silently come and lie down in their narrow couch. What a teeming multitude will be here only a short century hence! Not only every one now alive will have gone to his last resting place, but most of all who may be ushered into life within the next 50 years to come. Truly, wisdom calleth upon us from every hedge and bye way of life, to speed on our purposes of good, for "the night cometh wherein no man can work."

## SPECIAL MANURES.

FROM a small pamphlet by Mr. J. B. Lawes, we condense a few words of "Advice on Artificial Manures:"—

1. *Plants Cultivated for their Primary Organs—Leaf and Stem.*—Manures suitable for meadow grass, clover, cinquefoil, tares, cabbages, and other fodder plants. Substances yielding ammonia rapidly. *Sources.*—Peruvian Guano, sulphate and muriate of ammonia, dung from stall-fed cattle, salts of lime, with phosphate of ammonia, soot.

2. *Plants Cultivated for their Intermediate Organ—Bulb or Tuber.*—Manures for turnips, mangel wurtzel. Phosphates, sulphates, and carbon. *Sources.*—Inferior sorts of guano, superphosphate of lime, well-rotted dung.

3. *Plants Cultivated for their Ultimate Organs—Seed.*—Manures for wheat, barley, oats, peas, beans, tares, and clover seed. Organic matter, slowly yielding ammonia. *Sources.*—Residue from highly-manured green crops, rape cake, dung from stall-fed cattle.

Under class 1, meadow grass should be manured with a substance like Peruvian guano or soot, while the clover should receive, in addition, a salt of lime. In class 2, mangel wurtzel may receive a larger amount of nitrogenised matter than turnips, as it does not readily produce leaves. In class 3, oats and beans are less liable to injury, from too large an amount of manure, than the other crops. About three or four cwt. of rape cake drilled below the seed, or broadcast, is often very beneficial to the wheat crop.

DEPRAVED APPETITE.—One of the most singular, though by no means uncommon instances of this disease in this country, is to be found among the clay eaters of North Carolina. Children acquire the habit while young, and continue it through life. Its effects are very injurious. Horses and cattle sometimes acquire the habit. Whether the same injurious effect attends the animals, we are not aware, but it is often unpleasant in horses. Do any of our readers know a remedy?



## JEFFERSON-COUNTY DAIRY FARMING.

It would greatly surprise some of the western and southern stock farmers, who boast of their favored climate and rich pastures, to visit this rock-bound county upon the shores of Ontario and the St. Lawrence, to see how much more money is made by the produce of cows in a climate of six or seven winter months, than in regions where it is very mild or frost quite unknown.

In my late flying trip to Watertown, N. Y., I had the pleasure of a visit to the farm of Mr. Moses Eames, about seven miles from the village, 600 feet elevation above it, and 1,200 feet above tide water, and north of latitude 44°. The surface is quite hilly and stony, with underlying rocks, and would be thought by strangers cold and unproductive. Now, August 21st, is the season of harvest of wheat, oats, barley, and grass. Mr. E. keeps forty-three cows, and makes a cheese every day that will weigh, when ready for market, 90 lbs., worth six cents a pound at home, or \$5.40, besides a liberal supply of milk and butter for a large family. And better butter and cheese, I never tasted; nor did I ever sit at a better table than in this farmhouse—this American farmer's home—Ah, "Home, sweet home," indeed.

*Milking the Cows.*—These are driven from the pasture long enough before night to enable the laborers to finish by daylight, without haste. From the lower yard, about half are driven into a commodious stable, and fastened in a long line by "stanchions," composed of two upright pieces of wood about five feet long, one of which is fast in a sill, and in a girder at the top, and the other moveable so the top falls back to give the cow convenience of putting her head and horns between, and is then closed with a catch, almost as fast as a man can walk along. Cows soon learn to take their places without any confusion. As soon as all are fast, the milkers commence, each being seated upon a stool, or chair, with a sort of back attached for the convenience of handling, and a great convenience it is. The milking is done with both hands, as rapidly as possible, as the owner has found that a dribbling milker will deteriorate the best cow in a very short time. As soon as all are done, the first section of the herd are turned out at another door, which opens into the upper yard, and then the second section is brought in, and when all are done, they are driven again to pasture. In the morning, the same course is repeated.

*The Advantages of Stabling to Milk,* are, that all the cows are sure to be milked—all stand quiet while milking, and there is no hooking and running one after another, and upsetting milk and milkmaid. If it is rainy and muddy, all are sheltered and upon a clean floor, and men and beast are better tempered, and give and get more milk, and save a deal of scolding, much time, and more money; insomuch that a herd of forty cows will pay for a shelter in one season. Putting in one half at a time, is an advantage; for twenty are easier managed, with less huddling in the stable than forty, and

are only confined half as long, make less droppings, and only require half as much stable room, and each section has an opportunity to drink in the yard while the other is in the stable.

*Disposal of the Milk.*—The milk pails are carried as fast as filled to the milkhouse, and emptied into a vat of suitable size, say 7 by 4 feet, and 2 feet deep, made of wood, lined with tin, having a space between, into which cold spring water is drawn at night to cool the milk and promote the raising of the cream. This vat is elevated upon legs for greater convenience, so that the top is some 3½ feet high. When the morning milk is added, the water is drawn off and a conducting pipe from a small boiler fills the space with steam to scald the curd, which is made in the same vat. The steam is then turned into a barrel of water and heats that ready for cleansing utensils without the least trouble.

*Taking off the Whey.*—Another vat of a smaller size, with rollers in the legs, is placed along the side, and surface whey dipped off, and then it is rolled to a spot where a conductor, opening through the floor, receives the contents and carries it down to the pig pen. The curd is next dipped into a strainer in the small vat and the whey drained off, and then it is rolled along side of the press, and put into the hoop upon a sliding board, so the whole is done without any hard lifting. The press is one of Mr. Eames' own make, and with a small weight, will give seven tons' pressure. In turning the cheese in press, a small wheel table is rolled along side, upon which it is done with ease. Upon the same, it is conveyed into the cheese room, where the cheese are kept upon long tables, and turned by rolling upon edge and over, which is generally done by Mr. E. himself, but without great exertion of strength.

The next process after placing upon the table, is, to bandage with thin muslin, made on purpose and costing only three cents a yard. The strips are cut two or three inches wider than the cheese is thick, and the edges turned over the corners and sewed, so that it is impossible for a cheese to spread or flatten down as they formerly did before bandaging came in fashion.

*The Temperature of the Cheese Room* is kept cool and dry by using a stove to drive off dampness, and then it can be frequently washed with cold water.

*The Average Product of Dairy Cows,* in this county, is from \$25 to \$35 each, per annum, and the average value per head from \$20 to \$28.

*Wintering Cows.*—Two tons of good hay is the amount estimated for each cow, besides straw and other coarse feed. If giving milk, grain or roots are added, as everything extra fed is paid for in extra milk. The cows are generally of the common breed, but look remarkably fine, not only upon this well-conducted farm, but upon hundreds of others of the same sort in this rich farming county.

*Buying Curd.*—I was told of one man, in this county, who buys the curd of five hundred

cows, every day, and makes it into cheese. I understand that he pays five cents a pound, and takes it fresh as soon as well drained. Mr. E. says he can afford to pay that price. Cheese and butter are the staple exports of this county, and no grain-growing region, within my knowledge, can show so large a proportion of wealthy farmers, good farmhouses, good-looking and well-improved farms, and such a number of well-to-do-in-the-world people as Jefferson county. The women and children here take more interest in agricultural improvement and know more about it, than a majority of the men in some places. When you know the farmers' wives there, you will not be surprised to find such pretty girls and noble boys. Would you know the reason? They read. Yes sir, they read, and read agricultural papers, too. One handsome, intelligent boy, about fourteen years of age, came up to me just as I was leaving, and said, "Mr. Robinson, I should like to have you send me the *Agriculturist* for a year. Here is the money." That boy will make an intelligent, good man. The same boy had the sole management of a large family garden, the past summer. I need not tell you it was a good one.

*Jefferson-County Agricultural Society.*—I will tell you what fosters and keeps alive this spirit of improvement in this county. They have one of the oldest and one of the most active and efficient agricultural societies in the state, and the society have a hall, or place of meeting, upwards of 200 feet long and 50 feet wide, capable of accommodating three thousand people. It was built by the funds of the society, and is emphatically "the people's meeting house;" for there, all large public meetings are held, besides the agricultural annual fairs. What other county will look to this one of the north for an example, and go and do likewise?

In addition to the improved progress of agriculture, manufacturing of cotton, wool, paper, flour, axes, and many other things flourish here in an equal degree.

*Plank Roads.*—There are six of these valuable improvements leading out of Watertown, which is rising from the ashes of the great fire, like a phoenix in revived plumage.

*Thin Soil.*—Much land in this county lies upon a flat surface of rock, so near, that the plow sometimes runs quite down to it. When this is lime rock, the land is very productive and does not suffer so much as I should expect by drouth. It produces sweet grass and is more valuable for dairy purposes than any other. A railroad, now building through this county, will soon open its hidden treasures to the view of the world. Indeed, I intend to see more of it myself.

*Creating a Spring.*—When fitting up his dairy, Mr. Eames was much at a loss about a supply of water, having no spring that would give him a constant running stream. But he got one, and the way he did it is worthy of notice and imitation. He examined the sidehill, about one hundred rods above the house, and selected a favorable spot, where the land had a "spouty"

appearance, and dug a reservoir and wing ditches to form underdrains into it, and soon had the satisfaction to find the plan succeed which gave him a living fountain that runs summer and winter in the cowyard without fail from the drouth or frost. This is only one of the fruits of an intelligent mind devoted to agricultural improvement, and possessed by a self-made man. But he is a reading man as well as a working one.

SOLON ROBINSON.

#### REMARKS ON BREEDING.

As an illustration of the effects of *in-and-in* breeding, the following instance is related to us as having occurred in a particular neighborhood in this county. A farmer of a sour, unsocial disposition, who as much as possible avoided all intercourse with the rest of the world, and shunned asking the slightest favor of a neighbor, lest he might at some time be desired to reciprocate the kindness shown him, for a long series of years, bred his cattle entirely from his own stock. In consequence of this course, such a herd of mis-shapen, ungainly, big-headed quadrupeds were produced that they could scarcely be recognised as belonging to the cattle kind; and "—'s wolverines" were for a long time the butt of ridicule in the whole vicinity.

The careful breeder, upon either system, will avoid using, even for a single season, any animal possessing obvious defects; for such defects, once introduced in but the slightest degree, are liable to be transmitted and reappear even after several generations have passed. To the many curious and valuable facts already on record relating to this subject, the following may be added:—A portion of the fowls possessed by Constant Clapp, Esq., were formerly of the "downy" breed. But this variety, so strongly marked, had run out and entirely disappeared from his premises for eight years, when three of these downy individuals, perfect in every particular, reappeared among his flock—showing that the blood, though apparently obliterated, had yet been lurking there, generation after generation. [This is what is technically called in breeding, "crying back."—Eds.]

It was a favorite theory with the late distinguished General Schuyler, a man of extensive observation, of deep penetration, and sound judgment, that the true character, either of a man or beast, could be ascertained by looking at the parentage from which he had descended; and as an illustration of this, he used humorously to relate the incident, that in the early years of the Dutch trade with the East Indies, one of his ancestors, being a sea captain, had gone thither, and returned with a wife—a Mongolian lady, whom he had married in his absence. And the blood of that cross continued still to cling to the descendants two centuries afterwards, despite of all their efforts to eradicate it—so that down to the present day, in one branch and another of the family, one of these confounded East Indians would occasionally be making his appearance!—*Trans. N. Y. Ag. Soc.*



## FARM OF MR. BUCKALEW.

In the month of June last, we had the gratification of visiting Mr. James Buckalew. His residence is at Jamestown, N. J., about 16 miles west of South Amboy. Few men have done more for the improvement of the agriculture of his country than Mr. Buckalew, and all this has been accomplished by his own genius, coupled with an enlightened enterprise and untiring industry. Mr. B. commenced the world with nothing, as many of the successful men in America do, and now he has about 3,000 acres of land, 1,500 to 1,800 of which is under excellent cultivation. He cuts from 300 to 400 acres of grass, averaging  $1\frac{1}{2}$  tons per acre; plants 200 acres in corn, averaging from 35 to 40 bushels per acre; oats about 70 acres, with the same average; wheat 80 acres, averaging 20 bushels; besides these, he cultivates rye, buckwheat, turnips, and potatoes, all yielding much more than the general average produced on New-Jersey farms. In addition to these crops, he has peach orchards of his own, containing upwards of 30,000 trees, and others equally as extensive, which he owns in company with the Messrs. Stevens and Cook, all yielding a good income.

We can fancy many of our readers rubbing their eyes with astonishment at the mention of such large crops, taken from the poor sandy soil of New Jersey, and they are ready to ask, is the writer dreaming, or is he stating facts; if so, how has this success been achieved? Wait a while and you shall see; but first we must begin at the beginning.

We have said that the soil of this region is a light shifting sand, with scarcely any vegetable matter in it. The forest growth on this land is generally stunted pine, which the inhabitants of the country have been in the habit of cutting off about every twenty years, and then leave it to grow up again with wood. So poor was the land, that few thought it would pay for cultivation, and the result is, that the greater portion of it still remains in forest, worth only \$3 to \$5 per acre.

After clearing the land of the wood and burning the brush, Mr. Buckalew does not add the extra expense of grubbing it, but takes a strong lock-coulter plow, which will easily cut through any root two inches in diameter, and with this implement, he can turn up the soil nearly as well as if it were destitute of stumps and roots. The first crop is rye without manure, which yields well. Now he plows again, and spreads 40 bushels of lime to the acre, harrows that in, and then applies 50 to 100 bushels of Squankum marl (green sand improperly called marl). Thus prepared, he sows wheat, followed by grass. The lime helps to bind and give consistency to the loose soil, and the marl supplies it with potash; the result is, the large crops spoken of in the commencement of this article. Such a dressing will last ten to twelve years. Thus our readers will see that this dressing is the great renovator with Mr. Buckalew. Still, he does not neglect other fertilisers. He now and then plows in a green crop of clover, buckwheat, &c., in order to furnish vegetable matter to the

soil; he has, also, plenty of muck or peat in his meadows, which he mixes with barnyard manure and applies to the land, more particularly when planted with corn. The result of all this, is, that the crops pay a profit as they go along, and in a few years, the land which cost originally \$5 per acre, becomes worth, and will readily sell for \$20 to \$30, excluding the buildings.

The marl should be well dried before spreading, and the lime applied hot from the kiln. Mr. B. prefers sowing grass seed in the fall with the grain. The yield of grain he says is not so good under this system, but the grass is enough better to pay for it. He puts on plenty of grass seed, probably two or three times as much as farmers generally do; the result is, he gets a good crop of grass the first year.

The hay is unloaded in the barn with a tackle and fall, by hooking on to the four corners of the frame containing the load, and raising it from the cart. It is then swung round over the mow, and turned topsy-turvy. A ton can thus be unloaded in five minutes.

Mr. Buckalew is very enterprising in adopting all new and well-approved agricultural implements. He has horse power as well as water power, grain mills for his own grinding, threshers, fanning mills, raking and mowing machines, hay presses, &c. Water rams are placed on every little stream, to convey water to the top of his house and into every barnyard. It is his intention to carry it hereafter to the rising grounds on his farm, and thence irrigate the surrounding fields whenever required. This is a capital plan, and we hope he may be successful in carrying it out. It is surprising that so useful a thing as a water ram is not adopted wherever it can be applied. Though they are now well known and their value is indisputable, not one farmer in ten thousand has them in use, nor can they be persuaded to adopt them.

Having a contract for towing the boats on the Delaware and Raritan Canal, Mr. B. keeps about 300 mules, as he finds them much better for his purpose than horses. He has several reasons for this preference. 1st, their first cost is not so much; 2d, they begin to work a year sooner than horses; 3d, they last twice as long; 4th, they are hardier and not so liable to disease; 5th, it costs less to keep them. The best feed he finds for them is as much good hay as they will eat, and a mixture of half oats and half corn, ground fine, and the meal fed dry. During the working season, he keeps their collars on when at rest in their stables at night, as well as when at work by day. This so toughens the skin on their shoulders that it rarely becomes sore or rubs off.

Mr. Buckalew saves the expense of much fencing, by having his farms divided into large fields. Some of these, which, when he purchased, had fences running in every direction, dividing them into small inconvenient sections, he has thrown into large fields of 40 to 100 acres. He thus saves a large annual outlay for fences and repairs; makes it much more convenient to cultivate the land, and gives the estate an incomparably fine appearance.

We noted several other things at Mr. Buckalew's, which we intended to speak of at this time, but our article is already so long we must forbear for the present. We shall, however, again recur to them. In the meanwhile, if any one wants to make the acquaintance of an intelligent, energetic man, and see good cultivation, such as any farmer can practise, if he pleases, however limited his means, let him make a visit to Mr. James Buckalew, of New Jersey.

#### AGRICULTURAL GEOLOGY.—No. 5.

THE soils which overlie clay-slate rocks vary much in composition. In many instances, they are drift soils; that is, they have been transported from a distance and deposited upon a clean surface of rock. Thus, in the middle western counties of this state, gravelly and gypseous clays lie upon the slate rock, which latter influences very slightly the character of the imposed soil. If these rocks, which may be looked upon in the mass, as a sort of salt-water-mud rock, vary much in their own chemical composition; any soil formed of them must also vary in composition. For instance, between beds of shale, a bed of good limestone is occasionally met with; in other localities, the new bed is a flag or sandstone, both of which alter the composition of the soil, the former enriching, the latter impoverishing it. Where trap rock or greenstone is pushed up through slate, the soil is much benefitted by the increase of lime and alkali, which it thus receives. Such is the condition of much of the soil of Canada, bordering Lake Superior. The palisades, along the Hudson River, are trap rocks, but have not the same influence on the subjacent soil as in many other places.

The soil which is formed by the decomposition of a slate rock is a stiff clay; and all clays which are not of drift origin are derived from the wearing away of slate. We have already asserted clay slate to be a marine mud, derived from the decomposition of a previously existing rock. This previous rock contained the mineral felspar, the decomposition of which produces stiff clay. The mineral chlorite, also, produces tenacious clays by decomposition, and both felspar and chlorite, existing in most true slates, form the grand basis for a clay soil. Felspar contains in 100 parts, 65 of silica, 18 of alumina, and 17 of potash, and these are united together as a silicate of alumina and a silicate of potash. The mineral chlorite, that which tinges slates of a green color, is not so prevalent a constituent of slate as felspar, and contains in 100 parts, 26 of silica, 21 of alumina, 26 of magnesia and 14 of oxide of iron. The agreement of these two minerals is in the possession of silica and alumina, and any soil formed from them must contain these two substances in excess.

The felspar being worn to a fine powder and deposited in water, has had its potash almost all washed out, and much of the magnesia of the chlorite has been removed by a similar process.

But a slate rock is not wholly made up of the

debris of these minerals; deposited in sea water, where weeds and wreck grow, it contains imbedded in its layers an amount of marine *fuci*, and terrestrial flowerless plants, sufficient to give the rock a dark tint, and in a few cases to render it so bituminous as to burn continuously when once inflamed. Such is the condition of the Genesee black slate, and the fossiliferous shales of the central and western counties of this state (Ontario, Seneca, Tompkins, Steuben, Cayuga, &c.) Such rocks also contain the saline matter of the ocean of that period, in the form of common salt, gypsum, and chloride of magnesia, in minute proportions. A few of the beds of shale in the great wheat district of New York contain as much as 6 per cent. of this saline matter, a proportion nearly equal to 20 tons per acre. An ordinary shaly-slate rock is capable of yielding an average, in 100 parts, of

Silicates of alumina, iron, and magnesia,	92.97
Soluble saline matter,	6.00
Vegetable matter,	1.03
	100.00

Very many of the shales contain as much as 4 per cent. of lime in the state of carbonate (mild lime). The soil would be rich, indeed, which would be found to contain as much soluble matters as exist in the foregoing shale; such never occurs. In the weathering of the rock, the rains and stream water wash out the greater portion, but never leave so much as 2 per cent. behind.

The greater portion of Dutchess, Ulster and Putnam counties have a stiff clayey soil, arising from the decomposition of slate rocks. The following are the compositions of two soils in Ulster county:—

	1.	2.
Water of absorption,	1.00	2.56
Vegetable matter,	3.04	5.53
Silica and silicate of alumina,	88.08	88.36
Alumina and oxide of iron,	4.04	1.61
Lime,	0.03	0.78
Magnesia,	0.02	0.14
Soluble salts, as common salt, plaster and potash, and phosphoric acid,	2.02	1.02
	100.00	100.00

No. 3 is a stiff clay from Westchester, and No. 4 is a clay from Seneca county, the composition of which is as follows:—

	3.	4.
Water of absorption,	4.00	4.00
Vegetable matter,	4.06	4.23
Silicate of alumina,	85.08	87.00
Alumina and peroxide of iron,	4.08	4.40
Lime,	0.05	0.01
Magnesia,	1.04	0.01
Soluble salts of potash, with common salt, plaster, and phosphoric acid,	1.08	1.01
	102.00	101.00

These analyses shew the general characters of clayey soils. Leaving out of view these substances which are in some degree the result of



cultivation, as the moisture and vegetable matter, the great mass is a silicate of alumina and alumina with iron. The earths, lime and magnesia, are never present in any large amount, and the saline matters are the residual salts of the rock not wholly washed out. The predominant ingredient is alumina, and as the characteristics of alumina are those of clay, they require some consideration.

Alumina attracts moisture; when very pure, it is kept dry with difficulty; when mixed with silica, forming porcelain and pottery clays, it is very retentive of water; such clays are made up of 40 of alumina and 46 of silica in 100 parts, and from their large amount of alumina they are totally unfit for any agricultural purpose. The stiffest farming clay does not contain more than 25 per cent. of alumina, and is even then very difficult to work, owing to its affinity for water. In manufacturing pottery, it is difficult to get rid of this moisture, and the highest heat of a furnace is required to bake the clay; that is, free it completely from water. All soils containing clay exhibit the same property, so that a clayey soil means generally a soil imbued with moisture, stiff, cold, and heavy in its textural quality. This last sentence conveys the whole of its injurious effects, notwithstanding which, it has so many advantages that clay soil is universally preferred to any other.

Alumina of itself is no nutriment to plants. It rarely, if ever, enters into the composition of a vegetable and appears rather to have been introduced accidentally than to be a necessary constituent of any vegetable growth. But it always supplies moisture to the plant, keeping the roots in a condition ever ready to absorb food, and constantly throwing out the spongioles; furthermore, this water so supplied always contains saline matter, so that both moisture and salts are constantly supplied by a clayey soil.

Alumina is the densest of the earths, and a clay is the heaviest of soils; if a cubic foot of loose earth weigh 95 lbs., a similar brick of clay will weigh 135 lbs.; there is more matter in a given space, and therefore more nourishment for plants in a given average of clay soils than in any other.

Alumina has a great affinity for potash. It is almost impossible to wash it free from it, and clays have a similar property in retaining any potash salts in the ground. Perhaps this is the most valuable property of alumina. It may be said, with truth, that there is no stiff clay destitute of potash; and as this is the most important mineral ingredient in cultivated plants, we see one reason why clay soils are better adapted for husbandry than any other lands.

SET OUT FRUIT TREES.—As you value health, long life, and smiling friends, do not let the winter set in till this is done. If you cannot set them out, get them home from the nursery, and bury the roots in garden mold and keep them till spring. Do not say you "don't know where to get them." Send your orders to us, if you cannot do better, and we will see that you are supplied by an honest nurseryman.

#### ECONOMY AND PRESERVATION OF FARMYARD MANURE.

At a late meeting of the Highland and Agricultural Society of Scotland, Dr. Anderson delivered an important lecture on the "Economy of Manures," from which we make the following extract:—

I beg it to be understood as my decided opinion, that farmyard manure must always be the farmer's main stay. Good farmyard manure will contain more or less of all the constituents of our crops, but, in estimating its value, we must be contented to take into consideration only its more important constituents, and, in this way, I conceive we may obtain a sufficiently near estimate, by knowing the amount of nitrogen and phosphoric acid which it contains.

In the management of farmyard manure, two different questions require to be considered. First, the production of a manure containing the greatest possible amount of nitrogen; and, secondly, the successful conversion of that nitrogen into ammonia. It is not unimportant, of course, that the other constituents of the manure should be present in abundance, but it may be assumed, as generally true, that the treatment likely to produce the greatest amount of nitrogen, will be that which produces the most valuable manure in other respects. In regard to the first of these questions, there is a want of definite information. It is a common statement, however, that the value of the manure is dependent upon the nature of food with which the cattle that produce it are supplied. That, for instance, cattle fed upon oilcake produce superior manure to those fed on turnips. I am aware that this opinion is not universal, as I have heard it disputed by farmers of skill and experience. I am inclined, however, to believe that it is to a certain extent correct. Supposing, then, that two samples of such manure differ, it must be obvious that it is the dung and urine of cattle which differ; the *litter* mixed with such dung will be the same in both cases.

As regards the general question of the preservation of manure, I apprehend that the most important matter is its protection from air and moisture. In the way a common dung heap is made, we have, in fact, exactly the conditions to occasion loss of its valuable constituents. It is exposed to a more or less free current of air, which facilitates the volatilisation of the ammonia as it is formed; and it is exposed to the falling rain, which washes out the soluble salts, and what ammonia the winds have spared, into the subjacent soil. It is true that the former of these sources of loss can be got the better of by the use of acids or of gypsum, and mixing with dry earth; but when the ammonia is thus fixed, as it is said, it is fixed only as regards *volatility*, for it is still *soluble*, and liable to be washed away by rain.

In order to have farmyard dung in the best state, it must be preserved under cover; and, my impression is, that the introduction of covered dung pits is likely to prove of great importance. We have another matter to attend to,

also, in the management of farmyard manure—its fermentation, namely, by which is meant the production of such a decomposition as converts the nitrogen present into ammonia. The importance of this decomposition depends upon the fact, that, by this means, we obtain a manure which acts with greater rapidity than one in which this decomposition has not been effected. The fact is, that the formation of ammonia, takes place much more slowly, when it has been incorporated with the soil, than when it is heaped up in the dung heap; and as the nitrogen must pass into the state of ammonia before it is absorbed by the plant, we require to effect as much of that change as possible, if we are to have a manure of rapid action.

#### A NEW WHEAT FOR THE SOUTH.

INCLOSED, I send you a small sample of wheat of the present year's crop. It resembles the white-flint, but is not so called in this neighborhood. The heads are rather short, but well filled, containing from thirty to forty or more grains. The awns, or beards, are from half an inch to an inch in length, very stiff.

The crop, of which this is a sample, weighed 68 pounds to the bushel. The flour is equal to any of the Genesee brands we get in this country. This wheat, in this latitude, ( $33^{\circ} 40'$ ) if sown the last week in November, or first in December, will mature by the last week in May. My last crop, I commenced sowing on the 27th of November, but on account of wet weather, I did not finish until the 7th of December. I sowed  $8\frac{1}{2}$  bushels, but did not measure the land, as I intended to sow one bushel to the acre. The land was in corn and peas. I gathered the corn, cut down the stalks, and chopped them up with hoes; then sowed the wheat and turned all in together, having gathered the thickest of the peas, but let no stock on to eat the vines, as is usual in this section of the country. The wheat was sown in a very slovenly manner, by which I lost much, and was badly threshed for want of a proper machine; but I finally measured 85 bushels, weighing as before stated, 68 pounds per bushel.

The land upon which the wheat grew was what is called "mulatto land," being of a redish-brown color, with a red clayey subsoil, and had been planted with corn and cotton some twelve years, without any manure, except a handful of cotton seed to the hill, which I put on the corn last year, on a small part of the poorest of the field. The wheat was harvested on the 28th of May, but was not "dead" ripe. I am satisfied that I lost 15 bushels in the harvesting and threshing.

I think this the best wheat for this latitude; for it may be sown so late as to escape the fly, and still ripens early enough to be free from rust. It has a thin-skinned grain, and is quite liable to the ravages of the weevil after it is cleaned.

The universal opinion in this part of the country, founded on experience, is in favor of thin sowing of wheat, one bushel to the acre being the usual quantity. As it grows all win-

ter, it is perhaps more disposed to tiller than at the north; or perhaps, there is some deficiency in our soil; for, when it grows thick, if the soil has sufficient strength to make good heads, the straw fails to hold them up and the wheat falls to the ground.

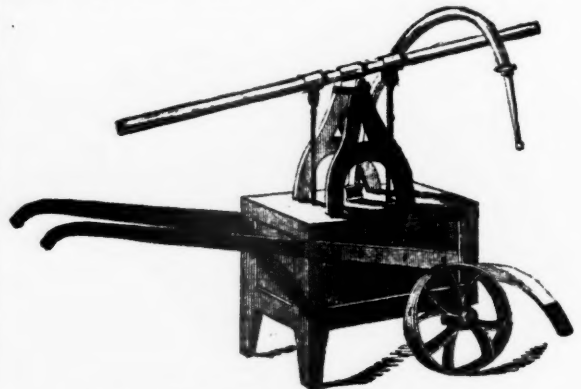
P. DAVIDSON.

Raytown Oak Knoll, Ga., Sept. 14th, 1850.

WITH the foregoing, we received a sample of a medium-sized but exceedingly plump, white wheat. Surely, if our Georgia friends can raise such wheat as this, there is no need for them to send to the north for flour. We think an application of ashes or potash, in some form, to dissolve the silica in the soil, and thus yield silicate of potash, would supply the requisite strength to the stem to enable it to support itself with a full head.

#### GARDEN AND FIRE ENGINES.

THESE are made of two kinds, the *single* or *forcing*, and the *double* or *suction and force*. The first requires to have the water delivered in the box, and the other will draw water from any depth not exceeding 30 feet, and force it equally as well as the first. They are easily worked by two persons, and will throw the water some 60 feet in height. Being placed on wheels, they can be moved wherever desired. Engines somewhat resembling that denoted by fig. 81, have been in use for some years, but the present ones combine some advantages and improvements over any heretofore in use.



GARDEN AND FIRE ENGINE.—FIG. 81.

#### ERRORS IN COMPOSTING FARM MANURES.

THE farmer's manure heap is usually the receptacle for every substance that has served its original purpose; but it is a mistaken idea that everything thrown in there will serve a useful purpose. We may, however, just say here, that this error has considerably influenced farm practice. Belief in the alchymy, rather than the chemistry of the farmyard, has led some persons to cart soil into the manure yard, and to carry it back again with the dung to the very field from which it was taken; adding materially to the bulk and expense of the manuring. They presumed that they added to its value but the effect of the earth upon the farmyard manure would be merely to retard decomposition, and thus might be a loss or a gain, according to the circumstances of the soil and the crop.



Animal substances, offal, and fish of every description are also very unprofitably applied to farmyard manure. The natural tendency of animal substances to enter into putrefactive fermentation is well known to be greater than that of vegetable substances. By placing them in the manure heap, we, in a further degree, facilitate the quality in which they naturally excel, and the tendency of which is to rob them of their most valuable element, nitrogen. Judicious practice should avoid this error, by adopting, if possible, a system having an opposite effect.

Lime is one of the substances which it is also an error to use with composts in which we have farmyard manure. It is equally an error to mix lime with any compound rich in ammonia. The tendency of lime, in all composts, is to promote decomposition and to waste nitrogen, which escapes, by union with hydrogen, under the form of ammonia, which is the very treasure of the dung heap, and of most other manuring substances.—*Morton's Practical Agriculture.*

#### AGRICULTURE IN NEW HAMPSHIRE.—No. 2.

As my remarks on the above subject in the June number of the *Agriculturist* were favorably noticed by "Reviewer," with a request that something further might be heard from this quarter, I am emboldened to transmit a few more thoughts, which are at your disposal.

New Hampshire is one of the smaller states of the Union, being about one fifth the size of New York or Pennsylvania, and one seventh the size of Virginia. It has been aptly styled the "Switzerland of America," being in many parts rugged, wild, and romantic. It is, indeed, a "hard state," requiring a great deal of bone, nerve, and sinew to subdue its rugged features in order to render it the pleasant abode of man. Nothing but perseverance and unconquerable determination can produce those results which it is our pleasure to witness, and which begin to excite the admiration of travellers. We have much to contend against. Our climate is cold, and the frosts of spring and autumn are sometimes injurious to our crops; still, by prudent calculation, we can produce a competence.

To begin with, we generally have health and elasticity, without that lassitude which prevails at the south and west, where, I am informed, they are obliged on waking to enter into a sober calculation to see if they have strength sufficient to rise. If we had to yawn half the day before we could take up our implements, we might well despair of obtaining a livelihood. We should have to sigh in autumn that the season had passed away, and no adequate provision made for the approach of the stern winter king.

"Reviewer" desires that some of your southern and western farmers, who find it hard to live on farms of a thousand acres, might be informed how many could be supported on a farm one tenth that size, and that half rocks. I know not now many *could* be supported on such a farm, but I well know that multitudes

of very large families *are* well supported on farms of that size and description, and even smaller ones. Let us take one of these hundred-acre farms, half rocks, and in other respects formidable and forbidding, and notice the *modus operandi* of getting a living from it. We must first suppose, that, by dint of many and many hard days' labor of man and beast, in digging, filling, levelling, scrubbing, drawing stone, and building huge walls, a suitable proportion of the farm is rendered tolerable for plowing; and, when such work is once done, and well done, it is always done. Now for the product. On one of these well-managed farms are produced one hundred and fifty bushels of corn, fifty or more bushels of wheat, or their value in some other small grain, from three hundred to seven hundred bushels of potatoes, thirty tons of hay, sixteen hundred pounds of pork, seven hundred pounds of butter and cheese, besides wool, fruit, peas, beans, garden vegetables, perhaps fat cattle, &c. These support the family, pay the taxes, wages of "help," and other expenses, and often leave an income over and above all.

The modes of cultivation are similar to those of other places. Around almost every country dwelling you may see broods of chickens and other fowls, under the management of a prudent housewife or her daughters. It would do you good, (doubtless it has done,) to witness the air of honest pride and satisfaction exhibited by many a country dame in rearing her fine flock of goslings or turkeys—the hope of many a future comfort and luxury. Long before they are fit for the market, she, with her children, begin to rejoice in the "nice things" which they will purchase.

Many of our pastures may be traversed in any direction, by leaping from rock to rock, with scarcely touching the ground; yet, for sweet and tender herbage, they are not surpassed. Young cattle, which are turned into them in ordinary flesh, are, by the autumnal equinox, brought out round, fat, and sleek, such as the most dainty epicure might fancy.

Our marketing has been mostly done in the large towns of Massachusetts, but the manufacturing towns, that are springing up in our midst, afford good markets for adjacent towns. Such are a few features of New-Hampshire farming. Have we not the comforts of life though we may have to labor hard to obtain them? I believe that agriculture is steadily on the advance, though we may never cut so great a figure as some other states. When we get on the right track, we shall surprise many a traveller. Our lands will grow better instead of worse. The "inexhaustible" fertility of western land begins to show the bad effects of cropping without manure. A writer in *Western Reserve*, Ohio, says: "I think they, (the farmers of Ohio,) might use to advantage much *more*, (manure,) than they do, as their soil *grows old* and has been pretty well used up." They will ere long have to.

By industry and economy, a people may thrive almost anywhere. Where dissipation,

indolence or loose management prevail, there will be much complaining, however boundless the fertility of the soil. P.

*Milford, N. H., Sept. 20th, 1850.*

#### THE CUT WORM.

I HAVE learned through the press and other sources that the "cut worm" has done irreparable injury to the cotton plant this spring, and is still at work on some plantations in the parish. Until this season, I have uniformly been an extreme sufferer whenever they appeared in the country—never escaped before—but fortunately for me, they have been "few and far between"—so far, doing my plants no harm. I think the cotton is now too large for them. It has been my study for some years to destroy or escape these worms—finally, for the first time, last year, I adopted the plan of burning off cotton and cornstalks, grass, and in fact everything combustible upon the field, in order to furnish as much ashes as possible to the land, generally knowing they are not fond of ashes nor of lime. This may have been some benefit, but I rely mostly upon late plowing—leaving the cotton land for the last, and breaking it up deep with two horses, just upon planting, say the 1st of April, thereby destroying millions of these worms, while they are generating. By more early breaking up, they can remain under the cotton ridge and have sufficient time to breed an army before the young plant can possibly grow out of their reach.

As a proof of this position, the few discovered in my field were of very small size. My cotton crop was planted between the 5th and 15th of April, considerably later than I usually plant. I do not, presume, however, that the late planting could have had much to do with it, because the cut worm is said to be worse upon the replant of May than the older stalks. I leave practical men to draw their own conclusions, still I must cling to mine, that it was the late ridging up of the land which saved me from the cut worm this year.

If the publication of these hints, hastily thrown together, will have a tendency to relieve the cotton planter, in 1851, from the ravages of this vile enemy of our great staple, I shall be gratified.

D. J. FLUKER.

*East Feliciana, 3d July, 1850.*

**PROTECTION OF OYSTER BEDS.**—It is quite time the legislators of our Atlantic states extend their cares over our oyster beds. Some general and politic regulations should be adopted, that shall secure to the rightful owner, whoever may be so designated by the law, a claim to his oyster beds as unquestionable, as is now extended to herds and flocks. There is a lawlessness, a prodigality, a recklessness in the management of this species of property, that leads to an infinity of waste. The adoption of an intelligent, judicious law, regulating this kind of property beyond any equivocation or mistake, would multiply this delicious viand immeasurably, and spread it in profusion on every man's board, while it added millions to our products annually.

#### WATER OXEN.

WE notice the arrival from Constantinople, per bark *New World*, via Liverpool, of two pair of Asiatic buffalo calves, or as they are generally called in the books, "water oxen."

These animals have been imported by Dr. Davis, for Mr. Williams Middleton, whom we understand, some time since adapted, (by wire fencing,) a large extent of land for the rearing of cattle, and in which he has about one thousand head, sustained entirely by the natural resources of the land, not only giving him a large revenue, but adding greatly to the supply of veal, butter and beef markets in our city.

A pair of these water oxen, brought out by Dr. Davis over a year since, are really objects of curiosity, (and of course of corresponding promise,) from their remarkable fatness, and this from feeding on the marsh grass of the Doctor's farm. Mr. Middleton has, in his inclosure, a great deal of this marsh land, now valueless, which, we believe, he is now about to turn to good account with these animals.

The water oxen disregard mud or bogs, and are hence well adapted, as working oxen, in such lands. A great part of the day, they spend in Ashley River and an artificial pond on the Doctor's farm, with only the nose out of water. They grow to an enormous size, the cows, tolerable milkers, and very fair as beef cattle.

We are thus particular in this notice, hoping that the planters on our extensive marshes and rivers, where the freshets are so destructive to cattle, will examine into the capacities of these animals, and avail themselves of this facility of importation.—*Charleston Mercury.*

#### STORM GLASS.

This instrument consists of a glass tube, sealed at one end, and furnished with a brass cap at the other end, through which the air is admitted by a very small aperture. The tube is nearly filled with the following solution, which may be obtained of any apothecary or chemist:—

Camphor, 2½ drachms; nitrate of potash, 38 grains; muriate of ammonia, 38 grains; water, 9 drachms; rectified spirit, 11 drachms. Dissolve with heat. At the ordinary temperature of the atmosphere, plumose crystals are formed.

On the approach of stormy weather, these crystals are often observed to occupy only the bottom of the tube, where they appear to be compressed into a compact mass; while, on the other hand, during the fine weather, they assume their plumose character, and extend a considerable way up the glass. These results depend upon the condition of the air, but they are not considered to afford any indication that can be relied upon of the approaching state of the weather. When exposed to a very low temperature, the compound camphor-liniment bottle affords the same appearance and indication as these storm glasses.—*Pharmaceutical Journal.*

**FALL PLOWING.**—If you have leisure before the ground freezes, do not forget that one day of plowing stiff lands is worth two next spring—breaking prairie land always excepted.



## SUNDRY QUERIES.

OBSERVING your invitation to subscribers to send you questions of general interest as connected with agriculture, I have taken the liberty to propose the following for your consideration, and if worthy of a place in your journal, it is hoped that you, or some one else, will favor us with appropriate answers.—

1. Will plaster of Paris, (sulphate of lime,) be active, as a fertiliser, in cases where carbonate of ammonia is not present in sufficient quantity in the manure to decompose the whole of it? (a)

2. Will the carbonate of ammonia, resulting from the above, and the residue of the plaster, (carbonate of lime,) remain neutral to the other ingredients in farmyard manure? (b)

3. Will sulphuric acid have any influence in the formation of nitrates in a compost heap, or in the fermentation of manure? (c)

4. In localities, where night soil, urine, soap-suds, soot, ashes, swamp muck, hen manure, pig dung, &c., exist in considerable quantities, can salt at 25 cents, and lime at 31 cents per bushel, be economically applied in composts or other manures on a farm? (d)

5. Can the barometer be relied upon as a means of foretelling the state or changes of the weather, and if so, what are the principal rules for ascertaining such changes? (e)

6. Has any one turned his attention to the construction of a cheap barometer afforded at such a price as will come within the means of the common farmer? (f)

7. Are there any offices or societies in your city for assisting persons in finding employment in farming and gardening, with a scale of prices, capabilities, &c., by which a farmer may know on what terms he can hire? (g)

A YOUNG FARMER.

Greenfield Hill, Ct., Sept., 1850.

(a) Yes. Plaster will always act as a nutriment for clover and broad-leaved plants, whether ammonia be present or not.

(b) Certainly. They have no power of decomposing farmyard manure.

(c) Sulphuric acid, in any quantity, will check fermentation. It never aids it; and a compost heap never lies long enough to form nitrates. The formation of these is a slow process, and they are more perfectly carried out by the use of alkalies, as potash, than by any acid.

(d) Scarcely economical, at these prices. Lime should never be mixed, in a caustic state, with any compost containing urine nor with the droppings from any animal.

(e) The practical rules for ascertaining the changes of the weather by means of a barometer, as laid down by philosophers, are as follows:—

1. The rising of the mercury presages, in general, fair weather; and its falling, foul weather, as rain, snow, high winds, and storms.

2. In very hot weather, especially if the wind is south, the sudden falling of the mercury foretells thunder.

3. In winter, the rising indicates frost; and

in frosty weather, if the mercury falls three or four divisions, there will follow a thaw; but if it rises in a continued frost, snow may be expected.

4. When foul weather happens soon after the falling of the mercury, it will not be of long duration; nor are we to expect a continuance of fair weather, when it soon succeeds the rising of the quicksilver.

5. If, in foul weather, the mercury rises considerably, and continues rising for two or three days before the foul weather is over, a continuance of fair weather may be expected to follow.

6. In fair weather, when the mercury falls much and low, and continues falling for two or three days before rain comes, much wet must be expected, and probably high winds.

7. The unsettled motion of the mercury indicates changeable weather.

8. Respecting the words *Rain, Fair, &c.*, engraved on the register plate of the barometer, it may be observed, that they cannot be strictly relied upon to correspond exactly with the state of the weather, though it will, in general, agree with them as to the mercury rising and falling.

(f) Barometers can be purchased at the mathematical and philosophical instrument stores, for prices varying from \$10 to \$25. The storm glass, described at p. 338 of the present volume, can be furnished by any chemist or apothecary, for 50 cents or less.

(g) We know of none.

## CULTURE OF GRAPES.

WHY is it that we are so backward, as a nation, in the cultivation of this wholesome and delicious fruit? In passing up the Hudson River the other day, in company with a friend just returned from a tour on the Rhine, he informed us that land there as rocky and as steep as the roughest hills of the Hudson, was worth several hundred dollars an acre for growing grapes; and it is his opinion that our soil and climate are quite equal, if not superior, to the famous banks of the Rhine. But in attempting the cultivation of the grape, we have committed a fundamental error, and that is in placing our principal dependence on foreign varieties. Had one fourth of the money been spent in the production of native seedlings, which has been in abortive efforts in cultivating foreign vines, we should doubtless, ere this, have had many first-rate sorts, producing abundantly all over the United States.

Another great mistake we have committed, is, that those who have attempted the production of native seedlings have condemned them too soon; and generally speaking, if they did not prove, on first trial, a good table grape, they would abandon them as worthless. Now it is known that several of the choicest kinds of wine grapes are worthless for the table; the taste, therefore, is no criterion of their value for this purpose; and the probability is, that many a seedling, which would have produced good wine, has been prematurely condemned, because not palatable for the table.

Still another great mistake has been made in

the cultivation of the grape, in not trying it in different kinds of soil, and in different exposures. It is well known that wine, produced from grapes grown on one side of a hill is worth five or ten times the price of that grown on the opposite side, although the grapes are of the same variety and are subject to the same cultivation. But rocky hills, such as produce the finest kinds of European wines, we pass over as too sterile entirely to grow grapes, and almost invariably plant them on our richest soils. This may be very proper for table grapes, but it is certainly the reverse of what is desirable for wine grapes.

Are there none now among the many wealthy and intelligent persons settled on the banks of the Hudson, who will undertake the cultivation of wine grapes? We know very well that it will require years of experiments, in the first place to produce the right kind of seedlings; and after that, many years more to give the wine made from their fruit an opportunity to perfect itself. But reflect for one moment upon the great benefit that we should derive, as a nation, if we succeeded in the enterprise. It is well worthy the attention of the horticultural societies, but it would be still more desirable if an association of gentlemen on the Hudson could be formed, with sufficient capital and perseverance to devote at least twenty years' effort to accomplish so valuable a purpose.

#### TO RENOVATE PEAR TREES.

WHERE pears are stunted in their growth, the bark thick and partially dead, I would recommend the following method:—Scrape the outer bark well; take off all the moss and dead bark into the green or living bark, and wash the trunk with potash, dissolved in water, united with soft soap in equal quantities.

Then dig the earth away from the roots, say three or four inches, and scatter around the space thus dug one or two shovelfuls of manure from the hen house, according to the size of the tree. Throw back the earth, mixing it at the same time with the manure; repeat the operation every spring, and if anything will cause them to grow, this will. I have found it far superior to any other manure that I have tried. A few barrowfuls of fresh stable manure, thrown into the hen roost, according to the quantity of fowls, will make an excellent manure, when rotted, for this or any other purpose.

*Westbury, L. I., Sept. 1850.*

#### CERTAIN CURE FOR FOOTAIL IN SHEEP.

THE following receipt was handed to me by Mr. Thomas Wilkinson, of England: I tried it successfully myself, and feel confident in recommending it to others as an effectual cure for this troublesome disease.

Take of quicksilver, one ounce, aquafortis, (nitric acid,) two ounces, and put them together in a glass bottle; place it in the sun, or in a warm place, with the cork out, till dissolved, when it is ready for use; cut the hoof away, as far as the foot is diseased; dip a feather in the

mixture, and be careful to anoint the diseased part all over. After this, keep the sheep in a dry place for eight or ten hours. They seldom require more than one dressing, if properly done. It will be necessary, also, to wet the feet of the sheep not diseased, with turpentine, to prevent it spreading further amongst the flock.

HUGH EATON.

*Union Farm, Hunterdon, Co., N. J., Sept., 1850.*

#### VILLAGE LECTURES.—No. 1.

WE insert from the London Agricultural Gazette, the following and succeeding lectures on Scientific and Practical Agriculture, which, from the simplicity of the language in which they are expressed, and their general utility to the farmer, we trust will be acceptable to a large proportion of our readers:—

*The Soil and the Air.*—The soil and the air, in connexion with agriculture, have no immediate bearing upon their daily pursuits; and whether the influences which thus affect the practice of the farmers be capable of satisfactory explanation or not, the practice and profit of their own individual occupations will remain precisely as they hitherto have been—undisturbed by those particular truths which our subject includes. This subject, however, I am persuaded, is not the less appropriate on that account for general consideration. It is one of general interest, not only because the air we all breathe and the soil we all tread cannot, but in some measure, affect us all alike, but because the usefulness of knowledge of this, as on every other subject, is not measurable by the pounds-shillings-and-pence scale, which would confine it to those cases exclusively where a money result depends upon the possession of it. There is a usefulness besides that which immediate profit measures; and though the agriculturist should not, and others could not, earn the more because they know the more of the air and the soil in connection with the art of cultivation, yet such knowledge is beneficial to all as an addition to mental if not to material wealth—as food for the mind, which, like the body, can live only by appropriate nourishment—as matter for pleasureable thought, from which, as from all other topics, we may usefully draw the unfailing inference regarding the wisdom, skill and power, and goodness which creation everywhere exhibits.

But if the soil and the air, in connection with agriculture, may reasonably claim the attention of all, it seems to force itself upon that of the farmer, and it is in that aspect of the subject, almost exclusively, in which it appears to him, that I have now to ask your attention. It certainly must have sometimes occurred to those who cultivate the ground and superintend the growth of crops, to ask where these crops all come from. Do you think that they come out of the land—from the soil on which they grow? Let us just consider this question in detail. Take the case of a forest of trees. Did all that wood come out of the soil? Suppose a man to plant an acorn in a piece of clay land and watch its growth. He sees the shoot and



the young tree increasing in size, and if he should live long enough, he would ultimately see the old tree with its trunk, its branches, and its twigs, containing perhaps 40 or 50 tons' weight of wood—a result of the life which was resident in that little acorn. Where did it get that wood? The roots of the oak grow downwards in the earth to a great depth—do they find its woody matter there? They also spread on the surface to some extent, but do you think that there is enough of the woody charcoally matter there to furnish the material of that great tree? It was a poor clay when the acorn was planted, and no one has been near the place since to supply the growing plant with the matter it wanted. We may suppose the tree to have stood in a forest near which no dung cart ever went, so that no supply of food for the plant could have reached it beyond what existed when the seed was planted, and then the soil was very poor, and contained none of the material which has since appeared in the stem and leaves, and branches of that great tree. How did they obtain it? The thing certainly appears difficult of explanation.

Take the case, too, of any of our common crops—of our grass lands, for instance. Let us imagine the case of a dairy farm of 100 acres; we may suppose it to be able to maintain a herd of 30 cows. What will such a farm produce in a year? Suppose it to be good land, able to keep a stock of good sort. Perhaps I shall not be far wrong if I put the produce of a cow at something like  $3\frac{1}{2}$  cwt. of cheese, and 30 or 40 lbs. of whey butter every year; and besides this, there may be some bacon made from the waste of the dairy. Well, then, a farm of 30 dairy cows will yield nearly five tons of cheese, and eight cwt. of butter in the year, besides this bacon. That quantity of butter and cheese are exported annually from that extent of grass land. Now, where did that butter and cheese come from? Have they been made out of the substance of the cows? They are as heavy now as they were. It has not been made at the expense of the cows—any more, indeed, than the wheat or the barley, which comes from the threshing machine, is made at the expense of the machine. The cows are merely the machines by which the cheese is made out of the food they eat, and just as the wheat is in the rick that is being threshed, so the cheese resides in the grass that is being eaten. Well, then, where does the grass get it? From the soil, do you think? Just consider; take a hundred years—what has been added to the soil of that farm during that period? Hardly anything; the farmer may perhaps have bought some bran and some meal every season for the pigs; but then he has sold the bacon made by his purchases, so that the farm has lost as much as it has gained, in that respect. He has bought no manure. It will not do to say the farm continues to yield the grass because of the manure that is added, for none has been added to the farm, none has been brought on the farm. Manure, has, no doubt, been added to the fields, but none has been imported from without the

farm, and yet, five tons of cheese have been exported every year; and how has that great draught upon the farm been maintained without loss? The manure that is applied to the field helps the grass greatly; but it cannot supply the cheese I speak of; for you must acknowledge that the manure is just what remains of the grass after the cows have taken the butter and cheese out of it, so that every year, the land is robbed of so much cheese; that is, if the cheese be in the soil. But can you believe that it is? Can you believe that every year, the soil of this farm is the poorer by five tons of cheese than it was? Why, how long has it stood this waste? If we suppose that it has been yielding at that rate during 1,000 years, there must have been 5,000 tons of cheese in the soil of that farm—50 tons of cheese in every acre of it, at the beginning, and if anything, the farm is more fertile now than it was then—fuller of cheese, no doubt, than ever; so that for all we know, there must be thousands upon thousands of tons of cheese in it still. Ah! but that explanation cannot stand; we cannot believe that the wood of our trees, nor the cheese, or the butter of our dairy farms comes out of the soil. Where do they come from then?

Now, before attempting to answer this question, let us take the case of an arable farm. Suppose we take our own, at — for instance. It contains about 270 acres of land—off 120 or 130 acres of it, every year, we cut a crop of wheat, which may average from 32 to 36 bushels of wheat per acre; and besides these, 4,500 or 4,600 bushels of wheat, we sell annually, probably, ten or eleven tons' weight of beef, mutton, and bacon; that is, the animals we sell off, are, on the whole, heavier by that weight, than they were when brought on. We buy some 100 or 200 bags of meal and linseed as food for the live stock every year, so that much is added to the soil every year, and that may account for 500 or 600 bushels of wheat we sell off; but where do we get the 4,000, and where does all the beef and mutton that we sell, come from? It will not do to say that it comes from the manure; for set a watch upon the entrance gate of the farm, and count what goes in and what comes out of it in a year; hardly any manure goes in, and you will find that 4,000 bushels of grain go off the farm in a year, and you will find that ten or eleven tons' weight of meat go off the farm more than comes on it in the year. Where does all that food come from? The question is, whether or not it can be supposed to come from the soil.

During the past ten years, we must have sent off the farm 30,000 or 40,000 bushels of wheat, and 100 tons of meat. I take our own case as it is, the only one I am perfectly acquainted with; but any cultivator of the soil will, if he looks back a few years, have to acknowledge the same remarkable truths in the case of his own farm. Do you think that all that bread and beef came out of the land? Why, the land is richer and better after all that has been taken out of it than it was before; and if it be kept in cultivation for years to come, it

may yield hundreds of thousands of bushels of wheat yet; they are not there now, most certainly—where will they come from? Neither the wood of our trees, nor the dairy produce of our grass lands, nor the grain and meat of our arable lands can be supposed to come from the soil. If all the wheat, oats, rye, barley, beans, peas, bacon, butter, cheese, beef, mutton, and so on, that England has produced since it was first cultivated, were piled upon the land now, it would be more than a foot deep over the whole island. Deeper than the soil itself is, on the average, over the country. And should things remain as they are for another 1,000 years, the land will have yielded another such lot; that is, more food in point of bulk and of weight, than the soil itself actually is. Where has it, where will it all come from? That is the question. [The answer will appear in our next number.—Eds.]

#### ELECTRO MAGNETISM, AS A MOTIVE POWER.

PROFESSOR PAGE, in the lectures which he is now delivering before the Smithsonian Institute, states that there is no longer any doubt of the application of this power as a substitute for steam. He exhibited the most imposing experiments ever witnessed in this branch of science. An immense bar of iron, weighing 160 pounds, was made to spring up by magnetic action, and move rapidly up and down, dancing like a feather in the air, without any visible support. The force operating upon this bar, he stated to average 300 pounds through ten inches of its motion. He said he could raise this bar 100 feet as readily as through ten inches, and he expected no difficulty in doing the same with a bar weighing one ton, or a hundred tons. He could make a pile driver, or a forge hammer, with great simplicity, and could make an engine with a stroke of six, twelve, twenty, or any number of feet.

The most beautiful experiment we ever witnessed, was the loud sound and brilliant flash from the galvanic spark, when produced in a certain point in his great magnet. Each snap was as loud as a pistol, and when he produced the same spark at a little distance from this point, it made no noise at all. This recent discovery he stated to have a practical bearing upon the construction of an electro-magnetic engine. Truly, a great power is here; and where is the limit to it?

He then exhibited his engine, of between four and five horse power, operated by a battery, contained within a space of three cubic feet. It looked very unlike a magnetic machine. It was a reciprocating engine of two feet stroke, and the whole engine and battery weighed about one ton. When the power was thrown on by the motion of a lever, the engine started off magnificently, making 114 strokes per minute; though, when it drove a circular saw ten inches in diameter, sawing up boards an inch and a quarter thick, into laths, the engine made but about eighty strokes per minute. There was a great anxiety on the part of the spectators to obtain specimens of these laths, to pre-

serve as trophies of this great mechanical triumph.

The force operating upon the magnetic cylinder throughout the whole motion of two feet, was stated to be 600 pounds, when the engine was moving very slowly, but Professor P. had not been able to ascertain what the force was when the engine was running at a working speed, though it was considerably less. The most important and interesting point, however, is the expense of the power.

Professor Page stated that he had reduced the cost so far, that it was less than steam under many and most conditions, though not so low as the cheapest steam engines. With all the imperfections of the engine, the consumption of three pounds of zinc per day, would produce one horse power. The larger his engine, (contrary to what had been known before,) the greater the economy. He was himself surprised at the result. There were yet practical difficulties to be overcome; the battery had yet to be improved; and it remained yet to try the experiment on a grander scale, to make a power of 100 horses or more.

Truly, the age is fraught with wonders, and we can now look forward with certainty to the time when coal will be put to better uses than to burn, scald, and destroy.—*National Intelligencer*.

#### IMPROVED HAY RAKES.

AMONG other improved agricultural implements, is the revolving hay rake. And from the immense saving of labor and of time, I am surprised that so few persons in this section of the state use it. I say saving of labor, for, if ever there was a labor-saving machine, this is one of them, as it comes into use just at a season when labor is highest and most wanted for other purposes. A man, with a boy and horse, can gather as much hay in a given time, as eight or ten men can with the common hand rake; and at the same time with greater ease. I would much rather rake my meadows twice over after a revolving horse rake, than once by hand before. This, however, is not often necessary where the fields are free from stumps and stones.

Notwithstanding this great improvement, there are but few persons, who will not go on from year to year and pay their dollar or dollar and a quarter a-day for hand hay rakers when they might just as well make "Old Jack" do it all, only by using a little of the right kind of economy. But enough for the present.

L. DURAND.

Derby, Ct., Oct., 1850.

TO PREVENT FERMENTATION IN CIDER, WINE, OR BEER.—Add a small quantity of sulphite of lime; or bruise mustard seed, 14 ounces to 1 ounce of cloves, and add to the liquid when first put into the cask; or a small portion of each may be added. The article is sulphite and not sulphate of lime. It is quite innocuous in any quantity.



## SKETCHES OF CANADA.

*Kingston.*—There is not much in, nor about this town to excite the attention of an agricultural traveller. It is situated at the northeast corner of Lake Ontario, in latitude  $44^{\circ} 15'$ , upon a formation of blue limestone that affords a very abundant, cheap material for building, as may be seen in the numerous handsome edifices in and around the city, which is said to contain 13,000 inhabitants, counting the large military force stationed here, and all that are in, or ought to be in the penitentiary, and including all the suburbs. It is in appearance and manners of the people, very English, and some of their customs are very unlike those of our Yankee notions. For instance, the times of eating—breakfast at 8 o'clock, lunch at 12½, dinner at 5, and tea at 8. This custom, also, prevails at Toronto and many other places.

I before remarked that the Canadians have a sort of fancy for showing off in one extravagantly-fine public building—a sort of Mormon Temple. In this particular, Kingston has made a display of the grandest order in her market house. It is built in the form of a T, the front 240 feet, two stories high, with a large dome in the centre, affording room enough for all the courts and public offices the city will require for five centuries. The end of the projection, or bottom of the T, is also two stories, surmounted by a balcony and clock, and if it stood alone, would appear like a large building. The long intervening building is the butchers' market above, and sundries in the basement. The whole is of beautiful, hammered stone, and certainly presents an imposing appearance. There are, also, several very handsome stone churches, court house, jail, barracks, nunnery, Catholic seminary, hospitals, storehouses, and dwellings, and a little north of the city, fronting the bay, the extensive buildings and walls of the penitentiary stand out in bold relief to warn the honest man to remain so. Upon the other class, it has but little effect, for "A rogue's a rogue for a' that."

The whole front of the town is fortified in such a manner, that the whole Yankee nation never would be able to take it—until they made the attempt. Two routes of navigation to Montreal are open from here, one by the river and canals of the rapids of the St. Lawrence, and the other by the Rideau Canal and the Ottawa River.

There is very little wheat raised around Kingston, notwithstanding its limestone soil. And I believe very little, if any produce, is exported. Grass seems to be the principal crop; but if I may judge from the few cattle I saw alive, and the carcasses in market, both cattle and sheep are of the small order. Horses are not generally so good as at Toronto, and I fancy there are few places where they are. Oats are a considerable crop, and are now, August 20th, being harvested, and I suppose will be eaten by some other animals beside horses, as I saw several signs of "oat meal for sale." Barley is also grown largely, or else it must be imported; for certainly, it is much used after

being reduced to a liquid form, to which is added a few hops. And I wish it to be distinctly understood, that I am not of the opinion that this is the only drink made use of by the Canadians. I certainly do believe the prevailing habit of excessive drinking is one, if not the cause of want of energy to improve the agriculture and manufactures of the province. It is a misfortune that rests incubus like upon the great body of the people; and I do most respectfully suggest to agricultural societies, to offer premiums to all farmers who will dispense with the use of all intoxicating drinks upon their farms, as one of the means best calculated to arouse a spirit of improved agriculture. Another important consideration should be to induce farmers to read. This may be done in some degree by giving agricultural papers and books with all premiums, and to all who become members, as is now the case to a limited degree.

I met, at Kingston, with Mr. Marks, the acting president of the Colonial Agricultural Society, a very respectable and worthy individual, no doubt, but altogether too much of the "ancient and honorable fraternity" of Auld Lang Syne, for a station that requires vigor of body and intellect, and a little "book knowledge," to infuse a spirit into the farmers that no amount of money which parliament may grant will ever accomplish. One of the curious things one sees here, contrasting with towns in the states, is the military, pacing up and down before one's house, as sentinels, or in squads, at every corner, or occupying many a bar room, or drinking shop, of which there is no scarcity. I witnessed the march of somewhere near a thousand of "Her Majesty's Rifles," through the street, on Sunday, going to church; all stout, athletic young men, and I could not help thinking what an amount of human food might be produced by the well-directed labor of all these eaters of the bread of idleness.

*A Big Dairy Farm.*—While leaving Kingston, one of the Thousand Islands we passed, was pointed out as a very extensive dairy farm, owned by a Kingstonian, upon which my informant stated, the owner keeps two hundred cows. Whether the number stated is correct, I cannot say. It only seemed large, because it was in Canada. In New York or Ohio, I should not have doubted nor wondered.\* From the yards, spouts are made to conduct the milk to broad tin vats in the milkroom. The land upon these islands is very level and thin upon its limestone foundation, and of but little value for any other crop than grass. The marks of improvement are very primitive, so far as seen from the boat in passing. . . . SOLON ROBINSON.

TO PREVENT OXEN FROM HAULING OR CROWDING.—It is only necessary to lengthen the yoke to break oxen of this vicious habit. In some instances, particularly in lumbering with heavy teams on the road, we have been obliged to make yokes 12 to 18 inches longer than those ordinarily worn.

\* Afterwards I was informed the true number is 130.

## THE HOG.

RAMBLING, not long since, along the high street of one of the pretty villages of this neighborhood, we espied a female porker, with a numerous litter of irresponsibles by her side, rooting up the flowers of a beautiful grassy dooryard, in front of one of the many neat and agreeable residences of the place. Observing this, from his parlor window, a well-dressed, gentlemanly-looking man, whom we afterwards learned was the doctor of the village, stepped out, and in endeavoring to drive the great beast and the little "beastesses" from his premises, he was rudely jostled by the large one, and caught an unlucky fall. Rising quickly, more soiled in his clothes than injured in his person, he speedily succeeded in clearing out the disagreeable intruder; then, shutting his dooryard gate, and drawing himself up to his full height, he broke forth into the following not very flattering obijurgation:—

"If there be anything I do most heartily detest above all the beasts of the field and fowls of the air, it is that filthy brute—the hog. He was doubtless one of the curses sent after the fall of Adam to punish us for our many sins; but our Creator, in kindness to us, afterwards pronounced him *unclean*, and not only unfit to be eaten, but that he should be abhorred and driven out of the sight of all human beings. Jews, Mahomedans, and a few Pagan sects detest him; but we Christians, with a higher and purer faith, cherish him as we would a charmed serpent, even in our bosoms. Faugh! The foul, hated, unclean beast he is; and the dire author of half of the most disgusting diseases which afflict humanity! What breeds leprosy? The hog! What breeds cancer? The hog! What breeds scrofula? The hog! What originated other horrid diseases, the names of which I dare not mention? Again I say, the hog! 'Tis to this abominable quadruped we owe all our cutaneous diseases, consumption, smallpox, measles, and collateral maladies too numerous to mention; and for this reason, an All-wise Creator, under the Mosaic law, forbid man eating his flesh. Delicate-cured ham, pork boiled, baked or fried, roast pig, and sausages, I hate and thoroughly detest ye, one and all, as unfit to be eaten.

"Hence, then, ye foul monsters, the authors of all these; would that ye were annihilated! If men will be meat eaters, let them take beef and mutton, and poultry, and not the vile hog. Oh, destructive beast! Here you have rooted up my lawn, trampled down my beautiful flowers, and as though this were not enough, run your unclean carcass against my person, sadly defiling my clothes. Strange that man can cherish hogs, and above all, allow them the free privilege of our streets. Only see them. There they go along our foot walks, dropping their ordure for the delicate feet of woman to tread upon, and yet no one durst raise an outcry in the matter. We are overawed and overruled by a few filthy loafers; and though we have passed a law against swine running at large in the streets of

our beautiful village, still, no one durst put it in force, for fear of his popularity! Popularity? Must we be popularised at such a filthy rate as this? Heaven forbid! Henceforth I'll doctor every hog that I find, gratis. I'll give them corn pills without charge. *Charge*, did I say? No, there are a few kinds of charges they shall have to their owner's entire satisfaction; and these are, ratsbane, oxalic acid, cocculus indicus, strychnine, &c., *secundum artem*. I'll save the village the nuisance of these filthy beasts, the expense of empounding, and the loss and annoyances of their depredations. Hogdom, henceforth, shall be populated with their unclean spirits."

## FORCE PUMPS.

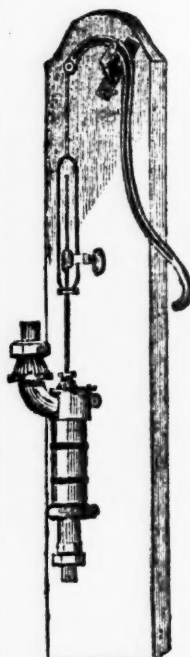


FIG. 82.

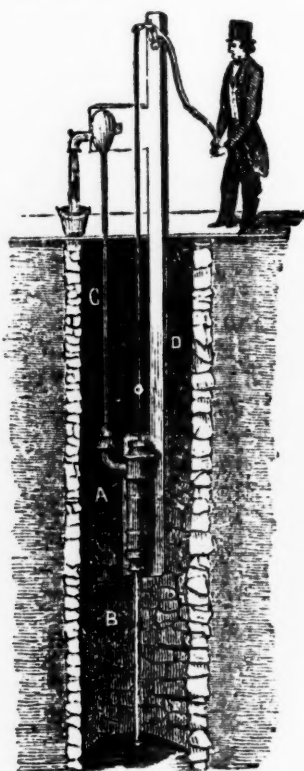


FIG. 83.

We give above, two cuts of the *forcing* or *lifting* pump, as it is distinguished from the *suction* pump. Fig. 82, shows the pump as sold from the warehouse. Fig. 83, as it is placed in the well, the only difference being in the position of the latter, which is in the well, with the suction and forcing pipes attached, and the rod, connecting the piston with the handle, lengthened. It will be seen that the force pump is also a suction pump, and capable of *drawing* water 32 or 33 feet, while its capacity for forcing it upwards in height, is limited only by the strength of the pipes, and the power applied for this purpose.

The force pump has not until recently been sold at moderate prices, but late improvements enable the manufacturers to sell them as low as \$12 or \$15, for ordinary pumps, and from that up to \$500, or even more, for the largest and most complete article.



## CONSTRUCTION OF LIME KILNS—BURNING LIME.

THE form of lime kilns vary; some being constructed inside in the shape of a hoghead, or of an egg, opened a little at each end, with the diameter at the bottom small, gradually widening towards the middle, and then contracting again towards the top; while others are made in the form of a sugar loaf, with the small end down; others, again, are of an oblong oval in the ground plan, as well as at the middle and top. The first of these forms is most generally in use, and when the sides are nearly perpendicular, it is observed that less fuel is necessary, in consequence of the great degree of heat which is created, above that which occurs in kilns formed in the shape of a

or inclined plane, of earth or stone, for carting up the fuel and limestone to their tops.

A kiln of approved construction, suitable for burning lime with coal, or other dry, smokeless fuel is denoted by fig. 84. It is supposed to be built on the side of a bank or cliff, of a circular form within, 32 feet high from the iron grating over the pits, three feet in diameter at the top, and seven feet across, near the middle, at a point eighteen feet above the grating. The walls are designed to be built of stone, from three to six feet thick, and lined with bricks. Below the shaft, or hollow of the kiln, are two arches, or pits, each three feet wide and three feet high, divided by a partition wall eighteen inches thick, extending up the shaft ten feet. About eighteen inches from each arch, or pit, is

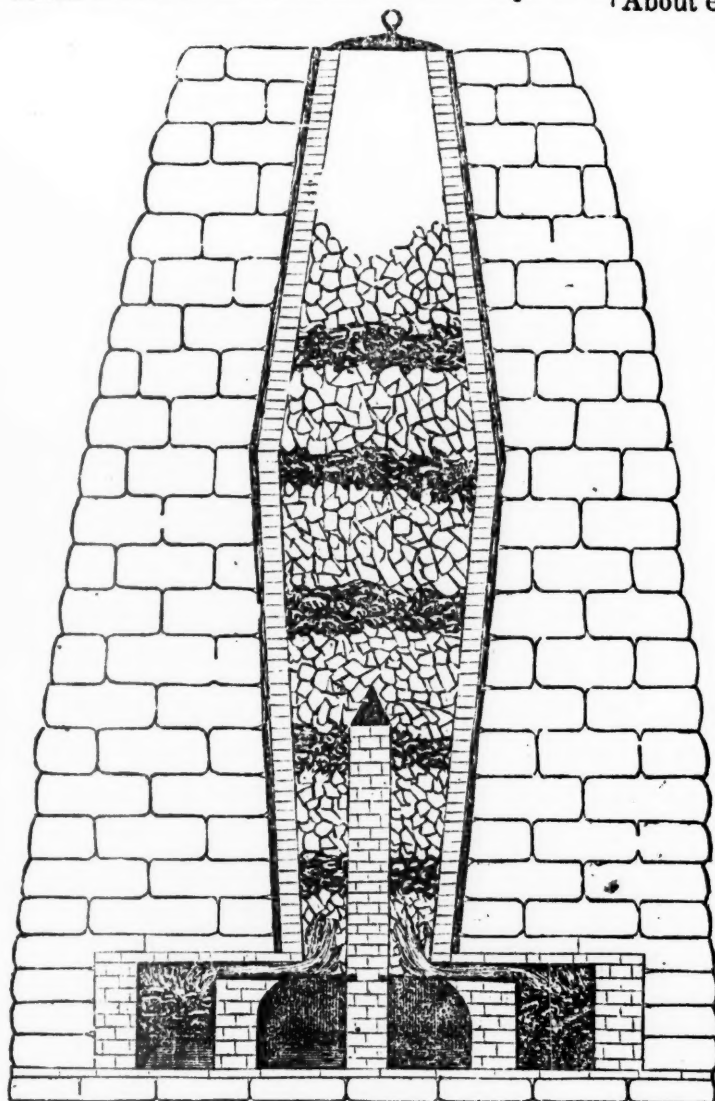
an oven, say two and a half feet square, where coal is used for fuel, and somewhat deeper, where wood is employed, communicating with the shaft by narrow flues. Below the shaft, are two moveable iron grates for dragging out the lime after it is burned. The ovens, as well as the arches under the shaft, are provided with iron doors, which are to be closed whenever it is desired to stop the draft. An iron cap, or cover, is also provided, to be placed over the top of the kiln, to prevent the escape of more heat than is necessary to keep up the combustion of the fuel. This cap is also furnished with a damper, or valve, for regulating the draft.

In a kiln like that described above, it is obvious that the lime can be well burnt, with a comparatively small amount of fuel, in winter as well as in summer, and that the farmer or others can be supplied with lime, at any time, without extinguishing the fire. All that is necessary to be done, is, to supply the broken limestone, or shells, and the fuel at the top of the kiln, and rake out the burnt lime through the iron grate, or opening, at the bottom, as fast as occasion may require. In case it may be necessary to check the burning for a time, nothing more is necessary than to close the iron doors at the bottom of the kiln, and the cover, or cap, at the top, when the fire may be kept alive for four or five days.

When the kiln is to be filled, the limestone should be broken into pieces

about the size of a man's fist, and laid in alternate layers with the coal, usually in the proportion of three of the former to one of the latter; but, as limestones vary much in their character, the proper quantity of fuel can only be regulated by trial. The coal should not be placed nearer the lining of the kiln than eight or nine inches, in order not to melt nor burn the bricks.

The class of lime kilns in common use, in the United States, are similar to that of Mr. Ward



LIME KILN.—FIG. 84.

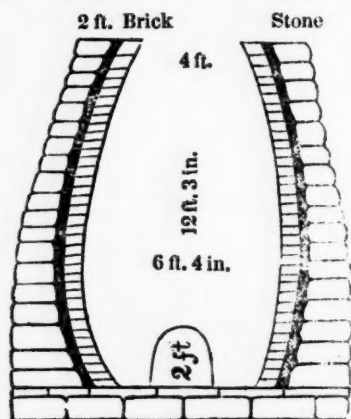
sugar loaf reversed. Near the bottom of large kilns, two or more openings are made for admitting the air necessary for supplying the fire and for dragging out the lime after it is burnt.

Lime kilns may be built either of stone or bricks; but the latter are considered preferable, particularly for the inside lining, as they are better adapted to stand a high degree of heat. They should always be situated at, or near, the quarry, and if possible, in the side of a cliff or bank; or they may be furnished with a "ramp,"

Priest, of Lisbon, New Hampshire, described by Dr. C. T. Jackson, in his "Final Report of the Geology and Mineralogy" of that state.

"The kiln holds about 35 tierces of lime. Each tierce holds six bushels. One which I measured, was two feet, four inches high; one foot, nine inches head diameter; bilges, to one foot, ten inches. The kiln is egg-shaped, and measures twelve feet, three inches in height, four feet in diameter at the top, six feet, four inches in diameter at the boshes (a little below the centre). Arch for fuel, two feet high. The walls of the kiln are two feet thick, and are made of mica slate, lined with common bricks. It cost \$150.

"Mr. Priest says that common bricks soon glaze over on the surface, and withstand the heat sufficiently well. Four days and three nights are required for burning a kiln of lime, and ten cords of wood are consumed in the operation. From two or three men are employed. The cost of wood, cut, split, and delivered at the kiln, is \$1 per cord. The lime sells for \$2 per tierce, at the kiln."



COMMON LIME KILN.—FIG. 85.

#### IMPORTANT DISCOVERY—LARD RENDERED FLUID BY MIXING WITH ROSIN.

PROFESSOR OLMSTED, of New Haven, has lately made the important discovery, that, by adding one pound of powdered rosin to three pounds of lard, well stirred together, the mass becomes semi-fluid at 72° F., and on being melted, which it does at 90°, notwithstanding if melted alone the rosin requires 300° and the lard 97° of heat, the compound will remain transparent and limpid at that temperature. As it cools, a pellicle begins to form on the surface at 87°; and at 76°, it remains a dense semi-fluid.

The discovery of the above-named fact will be of great importance to those who use lard lamps, as the lard is rendered more fluid by the rosin, and the power of illumination increased two fifths; yet, after two hours' burning, it loses its brilliancy on account of the wick becoming clogged. This will not be an important objection in families, while in point of economy the gain will be considerable; for lard is worth three or four times as much as rosin.

To machinists, the discovery is very important, as it enables them to make use of lard, instead of oil, which is not only a saving in cost, but

what is of far more importance, the addition of the rosin completely neutralises the quality of acidity in the lard, which corrodes metals, particularly brass and copper, to such a degree it is unfit to apply to anything not in constant use. Professor Olmsted says, a thin coating of the compound laid upon a grate or sheet-iron stove with a brush, as thin as possible, will keep it free from rust all summer, although stored in a damp place.

To soap makers, the discovery is also important. If one pound of the compound is added to two pounds of common Windsor soap, the quality is greatly improved, and the tendency that soap has to grow rancid, when in use or kept moist, is thus entirely prevented. A Shaving cream of an excellent quality, may be made by taking a cake of good shaving soap and steaming it soft in a close cup, and mixing half its weight of the compound, and working it well together; adding a little oil of almonds or any other agreeable flavor.

The same compound applied to boots and shoes renders them nearly impervious to water, and if applied to the soles, will not soil the floor. The uppers will be soft and pliable, and not prevented from receiving a blacking polish.

For oiling carriages, the mixture of lard and rosin will be valuable; and when wanted for heavy wheels, a proper consistency may be given to it by adding wheat flour, or if greatly preferred, black lead.

No doubt the soap paste above described would be a good lubrication for carriage wheels. We hope this discovery will increase the consumption of lard, and thereby give an improved market to the farmer, and thus enable him to turn land into lard, and lard into light, and in the mean time enlighten his mind and improve his condition.

**ALDERNEY BUTTER—CHOICE GRAPES.**—We received, a few days since, from R. L. Colt, Esq., of Paterson, through his excellent dairyman and herdsman, Mr. Nicolas, a few rolls of the most delicious yellow butter we ever tasted. We had before eaten of the same at his own table, which is liberally supplied with this rare, (American,) luxury, from his pure Alderney stock.

And while Mr. Colt is connected with our paragraph, we may as well notice the splendid collection of choice foreign grapes, at his magnificent villa. Over 500 pounds had been sent to market this season from a single conservatory, which brought \$1 per pound, besides what were used at his table and given away; and we presume a greater amount were still clinging to the vines, presenting one of the most beautiful sights in nature. When will all our country gentlemen learn to bestow their leisure time and superfluous wealth thus worthily?

**WHITE BLACKBERRIES.**—We notice the production of this curious berry, at Danvers, Massachusetts. We wonder if white crows are fond of them?



#### STORING TURNIPS AND OTHER ROOTS FOR WINTER.

THROUGHOUT almost the whole region where roots are raised in any abundance for stock feeding, in winter, this is the most important month in the whole year; for now is the season in which they must be secured against frost. Nine tenths of all those which are lost every winter might be saved by attention to them this month. A few hints, although often before given, will still be useful to some of our readers, new beginners, perhaps, as to what should always be done in putting away these valuable crops for winter.

**Storing Turnips.**—First, be sure and pull them in dry weather, if possible. Throw them together as they are pulled, but not in large heaps; otherwise, the dirt adhering, will become mud by the sweat of the pile before the tops are cut, if suffered to lie any considerable time. Never pull nor wring off the tops, but cut them smooth with a sharp knife. Select a dry, smooth spot upon descending ground, to form the heap, which may be long or round, provided no round pile exceed 100 bushels. Lay the roots in a smooth pile, the sides on an angle of about 45°, and cover with straw, laid on straight, so as to form a good thatch. Rye straw is the best. Cover with just earth enough to preserve them, which will vary from two inches to two feet, in different latitudes of this country. No definite rule can be given. In all the warmer latitudes, the piles, or heaps, should be provided with ventilators. Nothing is better for this purpose than a bunch of fagots about six inches through. Four boards, six inches wide, nailed together, and bored full of auger holes, set in the centre of the pile, like a chimney, will answer an excellent purpose. The ventilator must be protected against rain, and carefully covered before freezing weather.

In digging the dirt around the pile for covering, form a continuous ditch, in order that water cannot run in. Be careful the roots are dry and sound when put away, and you may be assured they will keep in fine condition.

**Storing Common Potatoes,** by the same rules, will be found most effectual. If you ventilate the heap, as above directed, you need have no fear of covering it too warm at first.

**Storing Sweet Potatoes.**—These are very difficult to keep, in all places, particularly in freezing climates. They must be kept very dry and warm. And yet not too warm. A very good plan is practised by Dr. Philips, of Mississippi, first, by laying down a bed of cornstalks several inches thick, which serves as an underdrain and ventilator, leading from the sides to the one in the centre. The outside, he also covers with cornstalks and a very little earth, and the whole protected with a temporary roof. It is a very cheap, and with him, a very effective way of preserving this most valuable edible root for all the southern portion of the United States.

Mr. DeLaigle, of Augusta, Georgia, raises from 3,000 to 5,000 bushels of sweet potatoes every year. A very common crop with him is

300 bushels per acre. His method of preserving them is in an immense roothouse, made of bricks, partly below the surface, in which the roots are stored with pine straw, which is one of the best absorbents of moisture he could use, and serves to keep the potatoes free from the dampness so natural to them.

**Storing Beets and Carrots.**—These roots require much more careful handling than turnips and potatoes, but with proper attention, may be put up and kept in the same way. Beets are often injured in cutting off the tops. They must not be cut too close, if you would keep them sound through the winter. Do not try to beat off the dirt adhering to the small rootlets. Let it dry and then adhere as much as will. To keep these delicious roots fresh and sweet for family use, pack them in dry sand, in a cool, airy cellar, but not cold enough to freeze. S. R.

#### WHY IS THE GARDEN MORE FERTILE THAN THE FIELD?

THE universal answer to this question, is, because it is more highly manured, and therefore has a richer soil. This is not always the case. But it is owing to the finely-pulverised condition of the beds, that gives it a highly absorbent power to attract moisture from the atmosphere—a source of fertility that many farmers scarcely seem aware that they possess. If the soil of the field were as carefully worked, and fresh earth constantly exposed to the atmosphere, as in the well-tended garden, the land would increase, rather than deteriorate in fertility. Let the rule be, “plow deep, cultivate well, pulverise lumps and sods, and return the straw to the soil,” and you may carry off an immense quantity of human food, and still have a fertile soil remaining.

Plants, in their nature, are organised beings. By means of their roots they take up food from the soil—and often, the very food which the soil has taken up by its power of absorption from the atmosphere, and which power is increased to an almost indefinite extent, by disintegrating the particles of which it is composed. The very act of plowing and harrowing, is an act of manuring. The act of stirring the earth, in times of drouth, serves as a watering of the plants. The moisture thus absorbed is loaded with a fertilising power that is lost upon a hard surface, for it lacks the power of absorption.

If, then, you would have your fields as fertile as a garden, you must not depend alone upon manure, but pulverise freely, not upon the surface alone, but deep below it.

**FEEDING STOCK ON PEA FIELDS.**—This is the month more than all others that cattle and hogs die from eating peas. Be careful and feed your hogs well with corn or salt slops, before turning them in. Salt and feed your cattle well. Do not turn hungry cattle upon fresh pea vines. If you have not hogs enough this year to make your meat, look out now for a supply, before they are put up to fatten. You can raise pork better than you can buy it with cotton.

**PREPARE YOUR WHEAT FOR WINTER.**

A VAST portion of winter-killed wheat comes in consequence of wanton neglect of the plainest dictates of common sense, while putting in the seed. Thousands of acres are sown every year upon hollow places in the field, which, although the richest spots, are covered with a pool of water whenever a heavy rain falls.

Without offering our own opinions or stopping to discuss the mooted question, whether wheat will produce chaff or not, we can safely say that all such spots in the wheat field will be much more likely to produce it than the adjoining ground that is free from standing water; and that spots are often to be seen at harvest, covered with this worthless grain, where a single furrow, or fifteen minutes' labor, would have opened a drain and kept the soil dry, and given the owner several bushels of sound wheat for such a very small outlay of labor.

It is a wanton waste of labor and seed to throw it away upon a flat clayey surface without turning water furrows to carry off the winter rains as they fall. It is only upon such neglected spots that the advocates of transmutation contend the change takes place. And as wheat is so much more valuable than chaff, it is perfectly surprising that any people will prepare the ground exactly right to produce the latter. So well do the wheat growers of Lower Virginia understand the benefits of drainage, that they sow almost universally in beds, and in many places, these are only five feet wide; that is, the wheat is sown upon beds of the same width as Indian corn is planted, and the advocates of narrow beds contend that they can make more wheat than those who sow upon nine or fifteen-foot beds.

Until American farmers learn the great value of underdraining, we must constantly remind them of the necessity of keeping the surface dry by open ditches. To every one of our readers, therefore, who has an acre of wheat sown, we say most earnestly, go at once and examine whether any little pools of water stand after a shower, and if so, take steps immediately to drain it off as fast as it falls, or you cannot expect to grow wheat, though you *may* grow chaff or weeds.

**TO PREPARE ASPARAGUS BEDS.**

SELECT a rich spot exposed to the sun; trench it four or five feet deep, and pulverise all the lumps of earth. If the earth were sifted, it would be all the better. Put six inches of good strong manure at the bottom, and on it a layer of thick grass sod; then another layer of manure, and afterwards, six inches of earth. Repeat these layers, and put on top, twelve or eighteen inches of soil and fine manure, well mixed together. Make your beds about five feet wide and set the roots out in the commencement of garden work in the spring, about fifteen inches apart, placing the crown about an inch and a half below the surface, with a stick to mark the location of each root.

The plants should be two years old when set,

and in placing them, care should be observed to spread out the roots into a natural position. After the bed has settled, give the surface a dressing of white sand, and do not forget to put salt enough upon it every year to kill all the weeds. It will then yield an abundance for many years.

**EMPLOYMENT OF POORHOUSE CHILDREN.**

WE have heretofore made repeated suggestions in our paper, of the practicability of profitably employing the children of poorhouses in agricultural labor. Nothing would more certainly benefit them morally and physically. But in order properly to carry out this plan, it would be necessary to have eligibly-situated farms and gardens, with capable and trustworthy superintendents, to watch over and direct them. Children have a much greater capacity for profitable labor at an early age, than is generally attributed to them. They are full of activity, and yearn for employment; in fact, employment of some kind is absolutely essential to their health.

If advantage is not taken of this desire for activity, and a right direction is not given to it, then it will take a vicious, or at least, an idle course, and great waste, or incalculable injury is the result. Stimulate a child by giving him some little remuneration, and he will take as much delight in work as play. There never was a better field for a benevolent mind to operate in than that of obtaining agricultural employment for the thousands of poor children, annually thrown upon our shores by foreign immigration; for of our own poor, thanks to the advantages bestowed upon America by a beneficent Providence, there are very few.

**CALIFORNIA MODE OF CONSTRUCTING DAMS.—**

The Californians now make their dams for turning the course of rivers, on a plan which the French engineers, who have emigrated there, have taught them. They fill bags made of drillings, about one yard square, with sand. This makes a good dam with a tenth part of the expense and time of digging a race. It will probably make an increased and continued demand upon drills, and thus help the manufacturers of this article which has been so long selling below the cost.—*Exchange.*

**THE IMPORTANCE OF LEAVES TO PLANTS.—**

Leaves are the principal organs of nutrition, through the pores, (stomates,) of which they receive a large proportion of their food. The number of absorbing pores upon a square inch, is shown in the following table, the chief part of which, it will be seen, are found on the under side of the leaf:—

	Upper Side.	Under Side.
Vine,	None	13,600
Rhubarb,	1,000	40,000
Lilac,	None	160,000
Cherry laurel,	None	90,000
Mistletoe,	200	200
Olive,	None	57,600
Holly,	None	63,600
Clove pink,	38,500	38,500



REVIEW OF THE OCTOBER NUMBER OF THE AGRICULTURIST.

*The Traveller.*—Yes, he is always coming or going here, there, and everywhere, picking up useful information for the readers of the *Agriculturist*. If it ever comes in my course upon some future voyage, I should greatly enjoy a visit to that Delaware farmer he speaks of, and his fine herd of Devon cattle—a breed that I have been fond of ever since I was big enough to appreciate beauty, whether clothed in hair or silk. I am surprised at the quantity of milk and butter they give. These Devons beat mine, although it is considered one of the best milking herds in old Connecticut.

*Researches on the Sugar Cane.*—There are some things in this article well worth the attention of American sugar planters. Science has done much for this culture, and will do much more. Applied to agriculture, it is no longer an obsolete idea.

*Massachusetts Farming.*—The writer says much improvement has been effected of late years, owing to high prices of all articles raised by farmers, which they obtain from manufacturers of various kinds, established among them. An excellent home-market argument. If all the farmers of America could but see that the increase of manufacturing establishments in this country is decidedly for their interest, we should hear but little said in favor of importing all we need, except agricultural products—fruits, vegetables, butter, cheese, milk, poultry, and eggs, all find sale. Manure is made or bought, the capacity of the soil is increased, and becomes more valuable; all classes flourish, and happiness abounds, where that which is needed for home consumption is home manufactured.

*Poultry Raising.*—Mr. Miner is death on the most fashionable speculation of the day, in the first sentences of his article; but just as we are about giving up the ghost, (of a fortune in the hen line,) he saves us by the consoling information that a "small fortune is sure," if we only follow the directions laid down by him—provided we do not count the chickens before they are hatched. There is one truth in his article which is worthy of notice; that is, no foreign breed of hens are at all to be compared to our own good old domestic sorts, for raising poultry and eggs for market.

*Premium Butter.*—These statements, from the Transactions of the New-York State Agricultural Society, could not well be more meagre and unsatisfactory, or perhaps uninteresting to the reader. By "cyphering" out Mr. Van Ness' statements, we may find out one very remarkable fact, and that is, if the daily average given, continued through the whole thirty days, his milk averaged a pound of butter to a fraction over twelve and a half quarts of milk, and the cows averaged a fraction less than a pound and a half a day! both of which are somewhat extraordinary yields. "The salt used, was from the Pacific Rock-Salt Company." Who, what, and where is this salt company, and why is *Pacific rock salt* better than any other pure arti-

cle? I will grant anything is better than *some* of the miserable stuff sent into market from the New-York State works.

*Mississippi Planting.*—There is more in this article than will strike most readers at first view. The Doctor says he can now raise eight bales of cotton with less labor than he formerly did six, upon the same land. A very great improvement; and how is it brought about? Simply by substituting good plows in place of poor ones. Is it not worth while for some more of us to look around and see if we cannot go and do likewise?

*Improved Harrows.*—Who is this writer that says the old forked stick with wooden teeth for a harrow, is still used in Connecticut? Out upon the slanderer. Do not think anybody will believe that, in this enlightened age of agricultural improvement, such a heathen can be found in the state of Connecticut, where all learn to read and write, and may learn to see, if not use good farming tools. And when once seen, can they ever after use such a miserable one as you describe? No sir. The idea is preposterous. You must take that back. Eat your own words. For the honor of our state, don't let it go abroad that "many of the farmers in this section of the state use no other harrows than those with wooden teeth." Why, you might just as well say they are a set of wooden-headed, forked animals, that don't know any better. Thank fortune, no one will believe such stupidity exists anywhere, except in South Carolina or some other benighted land of heathens, where they dig up the ground with hoes, or load manure into a cart with wooden trays, or some other practice equally behind the age. A wooden-toothed harrow in Connecticut, in the year 1850! I won't believe it! That is worse than Mr. Robinson's account of the Old Bog Meadow.

*Reclaiming Wet Lands.*—"The situation of my land which I have drained, was formerly springy and cold." Just the situation of thousands of acres all over this country. Springy, cold, wet, and unproductive, and yet containing some of the best soil upon the farm. I have often seen much labor expended in hauling stones away from the very borders of these wet spots, which would have served an admirable purpose to drain them, if buried in ditches with only half the labor required to carry them away. I have seen land well drained for years where stones were not to be had, by burying three poles in the bottom of the ditch. Brush is frequently used for the same purpose. Almost half the land now in cultivation in this country would be benefitted more than the cost of the most expensive underdraining.

*Irrigation.*—And the same land, and much more would be greatly benefitted by irrigation. These several articles upon irrigation ought to be read with attention, and their precepts put into practice.

*Poultry.*—A Jersey Quaker outwitting a Yankee clock pedlar! Verily Jonathan, thy cunning hath departed from thee, and thy brain hath become like unto an egg that is added,

and him thou hast often bled till he fainted, (toiling to pay for thy clocks,) doth turn upon thee, and tickling thy fancy with a feather, doth despoil thee of thine idols—the gold thou hast long worshiped. Oh Jonathan! Oh Bosting! You'll give many a poor fellow the *hen fever* to pay for that. I advise everybody to keep clear now of *Tri-mount*.

*Sale of Mr. Sheafe's Shorthorn Cattle.*—My readers will recollect I stated in the August number, in giving an account of my first visit to High Cliff, that I should attend this sale, although I had no intention of buying. I had a desire to see if this first great sale of high-bred animals in this part of the country, would at all compare with some of a similar kind in England, which had fallen under my notice. To say I was delighted, is but a faint expression of my feelings. The arrangement was excellent, and should be a lesson to all managers of cattle shows, *never to put cattle in pens*. The prices realised for these cattle, may sound high to some of our old-fashioned Connecticut farmers; but if they had been upon the ground, and seen them as they stood at their posts, proud of the admiration bestowed upon them by several hundred intelligent gentlemen present, I have no doubt they would have readily come to the conclusion that they were worth every dollar bid for them. I am satisfied that all went away well pleased with their visit, notwithstanding they were not among the fortunate purchasers; for, as I suggested, they had had the advantage of hearing not only the address of Mr. Allen, but the remarks and criticisms of good breeders upon this herd, and comparisons of various herds, and different breeds in the United States. I was very sorry to learn after I left the ground, that several gentlemen present wished to see me. Nothing would have given me greater pleasure on that day, than to have made myself acquainted with those who felt an interest in knowing who Reviewer really is. I beg they will not be so diffident in introducing themselves hereafter. The "Cap'n's offus" is always open, and no charge is made for "passage." Towards evening, I returned to Poughkeepsie, where I had left my horse and buggy and oldest daughter, who came that far on a visit to the daughters of my old friend P., who, after hearing my, perhaps, somewhat excited account of the show, while seated around the social circle of an American tea table, all regretted exceedingly that they had not gone down with me; and it was then and there unanimously voted, after full discussion by a score of intelligent farmers' wives and daughters, that there could be no impropriety in ladies attending such a place, and freely canvassing the merits of the cattle exposed to sale, as it is well known the English ladies are in the constant habit of doing. I also regretted my daughter was not present, as she is a better judge of the milking quality of cows, than her father; and it would have been such an excellent opportunity for her to contrast the Durhams with our favorite Devons, and also to discuss the matter, and spread the knowledge she might have gained,

among our quiet and somewhat behind-the-age neighbors of the "Valley."

*Trenching Old Orchards.*—The caption to this little article, conveys an idea to my mind of a different operation from the one described; that is a very good one, and so I believe "trenching" would be. If a ditch were dug between every two rows of trees, deep enough to cut off all the roots at the bottom, and filled with cobble stones, and then with sods, weeds, trash, chips, and soil, it would improve the old trees, and set them to bearing again, although they might have been nearly barren. To my certain knowledge, this treatment of a peach orchard is first rate. In setting out a new orchard, I have no doubt trenching would be the very best plan of preparing the ground.

*Value of Coal Ashes for Manure.*—I have had some experience in this application, and have no doubt but such ashes are valuable. But careful experiments, rather than analyses, should be entered into to prove the relative value of coal ashes with those from wood, as well as with other fertilisers. This would be an appropriate object for some agricultural society to offer premiums for. But unfortunately for the country, the list of premiums were stereotyped in the days of wooden harrows and Carey plows, and no innovator has yet been found bold enough to break up the old stereotype plates, and prepare a new set.

*Plowing and Planting for Orchards.*—In addition to all this, ditch and blind drain every wet spot in the ground you intend to plant in orchard, and then get the carts along side of that ancient pile of rotten chips, and discharge the whole cargo upon the ground around the young trees. If this is not sufficient to give a good coating, gather up in the spring, any waste straw, trash, or leaves, and spread them so as to keep the ground moist; and the way your trees will go ahead during the summer will surprise you, and your do-nothing neighbors still more.

*Plow for Sugar Planters.*—And why not for corn planters? In many parts of the south, corn is planted in drills five feet apart, and it is considered necessary to throw the land into high ridges, on account of elevating it above the influence of flooding rains. Is this plow the very thing wanted for such work? Why not give an engraving with a minute description? What do you mean by "economy worthy the consideration of planters?" Do you suppose they ever read the signification of the word in Webster's Dictionary? "A frugal and judicious use of money—that management which expends money to advantage, and incurs no waste—a prudent management of all the means by which property is saved or accumulated; a judicious application of time, of labor, and the instruments of labor?" Show me one who understands and practises this, and I will show you a customer for your plow.

*Superior Native Apples.*—It is surprising that so little attention is paid to growing native fruit. We see experiments every day in producing new varieties of potatoes, and why cannot new



varieties of apples and peaches be obtained with equal advantage?

*Gathering and Storing Winter Fruit.*—Much loss arises from the slovenly manner in which this is done. There is no labor-saving, and certainly no fruit-saving implement, of so little cost, that possesses so much value as the "fruit gatherer," figured in the September number. My plan of storing fruit in the fall, is in linen bags. It will stand a greater degree of cold, inclosed in linen, than in any other situation. Before cold weather sets in permanently, I overhaul and pack away all the sound fruit in barrels or boxes, and thus have it sound all winter.

*Hedge Plants of India.*—If there are any plants in India, or any other part of creation, that will make fence, in mercy let us have them, for as yet, they are as angel's visits to America.

*Premiums on Entire Flocks of Sheep.*—Glad to see the suggestion; for at present the "old stereotype edition of premiums," has nothing like it. Giving premiums for the "best buck" that may be exhibited, perhaps without a single competitor, is of about as much value to the country as would be a premium for a pig with a cute curl in his tail. Let us have whole flocks and herds in competition.

*Value of Roadside Products.*—Did you intend this as a severe rebuke upon the unprofitable manner in which the fields are cultivated? Or did you intend to make a strong show of the folly we are all guilty of in the enormous waste of land along the roadsides, given up to the spontaneous growth of elderberry and dandelion blossoms, blackberry and whortleberry bushes, and briars? Oh, my countrymen! When will you learn how much you tax yourselves, to fence these same "profitable roadsides," for the benefit of some piratical pig or prowling cow, or the accommodation of the "outside barbarians" of our city suburbs, who claim a pre-emption right to everything that grows "by the roadside," including all your loose rails and stakes, besides some that are not loose?

*Storing Winter Cabbages.*—All right but the straw, and that is all wrong. Do not use a bit of it, unless you have a particular desire to establish a winter nursery for young mice. Wrap the loose leaves around the head, and set it on the ground, and haul the loose earth around it, so it will not touch its next near neighbor, and thus you will show that you are no cabbage head yourself.

*English vs. American Girls.*—Why, you incorrigible bachelor. Would you recommend our delicate damsels, and gossamer girls, to "ride, drive, walk, row, run, dance, play, sing, jump the rope, throw the ball, pitch the quoit, draw the bow, and play the shuttlecock," and thus give their cheeks a natural roseate hue, instead of an artificial one, which is obtained with so much less labor? It must not be. 'Twill spoil trade in drugs and paints, and paper shoes, and drive physicians to physical labor. What! prefer English beauty to ours. Like begets like. If there are no wax doll-mothers, where shall we get wax-doll children? 'Twill spoil the breed.

REVIEWER.

#### EXTENSION OF THE SUGAR REGION OF LOUISIANA.

THE district capable of producing the sugar cane, or what was at first believed to be only capable of producing it, has been greatly extended since the commencement of cane culture in Louisiana. Then, it was thought the rich banks of the lower part of the Mississippi, where frost was but seldom seen even in mid winter, could only be cultivated for sugar. But it gradually worked its way up to the neighborhood of Baton Rouge, and over the Attakapas region, and along the banks of Red River.

While the culture was thus slowly marching northward, those at the south cried out "preposterous," and those still above the sugar limit, exclaimed, wonderful! and in some instances they abandoned their cotton plantations upon the hills, and came down to meet the more profitable culture of cane upon the river. Who then would have dared talk of making sugar upon the red hills of an old cotton plantation, in East Feliciana? Who dares now say that any more profitable sugar lands are cultivated in the state? Baton Rouge, instead of being far above all the sugar plantations, is becoming a central point. The march of the cane has passed her many miles, and leaving the overflowing banks of the uncontrollable Mississippi, has taken position far back among the hills, where, although the growth of cane is not so large, the yield of sugar is as good as on the coast; and, as the cane is better matured, the juice is boiled with less fuel, which is cheaper and more easy to obtain. Such has been the success of the last two years, that many new mills are being erected, and vast quantilies of land brought into cultivation in places where it would have been thought madness to talk of making sugar ten years ago.

Who shall set limits to the productiveness of the earth, or what man shall say to his fellow, "Thus far canst thou go, and no farther?" Who knows but the discovery of Melsens shall be improved—that the bi-sulphite of lime shall be converted into steam, and whole crops of cane prepared by that process so it cannot undergo fermentation, and may be ground at leisure? There will be no fear of frost, then, and sugar may be made as high up as Vicksburg, perhaps. Who knows?

**PORTABLE STEAM ENGINE FOR FARM PURPOSES.**—This engine is a beautiful piece of mechanism of half-horse power, working to a charm. It was operated in the hall, and attracted great attention. It propelled a grindstone, lathe, straw cutter, &c., working with ease at from 500 to 800 revolutions per minute. With it, a farmer might saw his wood, cut his straw and hay, grind his tools, steam his potatoes and other feed with the surplus steam, and while thus operating, save the labor and board of two or three men. It is well worthy of careful attention, and if durable, of general encouragement. It requires from 1 to 1½ cents' worth of fuel per hour, to propel it, and costs only \$75.—*Trans. N. Y. Ag. Soc.*

## THE HEN FEVER.

It is surprising to witness the working of this fashionable, we had nearly written *foolish* fever. The yellow fever and cholera may be more fatal; the "grippe," or broken-bone fever, harder to bear, but the "hen fever" is making the most fools, and engulfing the most money, particularly in New England; and we judge from numerous letters lately received from our friends at the south, that they are getting a touch of it even there. Our orders for Shanghaes Chittagongs, Cochinchinas, Plymouth Rocks, and half a dozen other puffed-up, worthless breeds of fowls, whose strong points of recommendation consist solely of long legs and necks, big heads, bodies meagerly covered with coarse flesh, and as destitute of beauty as the specimen, denoted by the cut below, are numerous, but these will all remain unanswered; for we have no idea of being mixed up with the miserable humbug in the hen trade, which is kept alive by a class of papers that might be better employed. The public look to the agricultural press for truth, instead of deception and twaddle.



ARDEA MINOR.—FIG. 86.

Breeders who live upon the gullibility of the public keep this fever alive, by means of publications, in such papers as will lend themselves to the *henhussys*, and by poultry books, got up on purpose to assist them to sell their great, overgrown, long-legged, crane-necked, big-headed abortions, not one of which is worth half so much to the farmer, as the old stock of Javas, Malays, or their crosses, the Bucks-county and Jersey Blues, which can be bought at a moderate price. We understand, that from \$20 to \$100 a pair is the asking price of these "great poultry breeders," who know no more of the true merits of a fowl, than they do about the

hen roost of the emperor of China, or the duck pond of the Great Mogul.

We are sorry to see respectable agricultural papers, like some we might name in Boston, engaged in such *small* business as puffing these miserable bipeds, (feathered or featherless,) into notice. We can assure them that their columns could be much better occupied than in such humbugging and *foul* foolery. They may be-praise or be-foul such as they please; but after all is said and done, the best and most profitable for the farmer to keep, is the Dorking, or a good common kind, of medium size, like the old-fashioned speckled Dominique, the latter of which can be bought for 50 cents to \$1 per pair. Such fowls can pick up their own living in the farmyard; they want neither cossetting nor stuffing, they can take care of themselves.

## FRENCH CONTRACT FOR ENGLISH CAVALRY HORSES.

For the last few weeks a great number of English horses have been exported to France, on account of the French government. There are several agents at present in this country for the purpose of making some very large purchases of chargers for the remounting of the French cavalry regiments, both heavy and light. The contract is for 12,000, at the price of £25 per horse, for the light cavalry, and £28 per horse for the heavy troops—Cuirassiers, Carabiniers, dragoons, artillery.

The above paragraph we cut from one of our English papers. It teaches the farmer the advantage of rearing an improved stock. Here is France with a much larger and more fertile country, and yet she is tributary to her great rival, England, for the well mounting of her cavalry horses. What a disgrace to France this is, and what an honor to England.

At the famous battle of Waterloo, one regiment of English cavalry was so superior to any in the French lines, that in every charge, they easily rode right over the French horses, completely discomfiting them with scarce the necessity of pulling a trigger or drawing a sword. It was the superior breed of the English horses, alone, that enabled them to accomplish this.

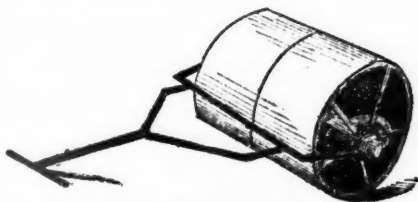
There is nothing superior to a first-rate American horse; and if our farmers will only breed from the best animals, we should soon have such a numerous stock in the country as the world never yet saw, out of Arabia.

ARRACK.—This is a spirituous liquor produced from distillation of palm wine, and also from a fermented infusion of rice. It is a drink much used in the East Indies, among some of the semi-barbarous nations. Opposed as we are to all intoxicating beverages, we cannot recommend its introduction into this country, unless it were upon the same principle we would tolerate wine, cider, and beer, as less likely to produce drunkenness than whiskey. A great fire is sometimes checked by a smaller one.



## THE GARDEN ROLLER.

This implement has been lately very largely introduced for horticultural and other uses. It consists of two cast-iron sections, one foot in width, and twenty inches in diameter, with an iron handle. The most complete ones have two large weights suspended from a shaft within the sections, to give them additional weight, and these are so adjusted as to throw the handle up when not under control of the hand, thus always keeping it clean. Though generally used by hand only, a horse can be readily attached to the handle for any heavy work. They are made in two sections to obviate the very bad effect in turning, where the entire roller is solid, by which the earth is scraped up on either side at the same time that it requires much additional power to move it. As now arranged, when turning, one roller is moving back while the other is moving forward. There is a further advantage from having small sections, in the consideration that if one, by any mishap, becomes broken, its place can be supplied by another, without prejudice or loss to any other part of the machine.



GARDEN ROLLER.—FIG. 87.

The field roller is made from sections of the same width, but of larger diameter, and each of double the weight of those in the hand roller. They have the further addition of a large wooden box, to hold any increased weight required, as they are always moved by a team, and are used for roads and fields, where large weights are necessary. But as the latter has been particularly described in fourth volume, p. 139, we omit further notice of it here.

## NEW-YORK AGRICULTURAL WAREHOUSE.

The following fair notice of our business is copied from the "Farmer and Mechanic," an excellent family paper, published in New York. Coming as it does from such a source, unsolicited, it is appreciated in the same kind feeling in which it is given:—

Among the many excellent establishments of the kind now in this city, we would invite the attention of our readers to the extensive Agricultural Warehouse and Seed Store of Messrs. A. B. Allen & Co., advertised in another column of our paper. For the last five years, we have watched the growth of this establishment, and, from the intelligence and experience of the proprietors, we feel justified in saying that no other house in the United States, if in Europe, offers so many advantages to the farmer, the planter, or the gardener, for the purchase of articles of husbandry, as the one under notice. An inspection of their extensive factories, lofts, warehouses, &c., connected with this establishment, will be sufficient to convince any one of the

truth of our remarks, particularly on witnessing the unsurpassed variety of implements, seeds, and machines which are exposed for sale. It is thus obvious that the farmer or the planter will have a better opportunity of selecting what he may need in an establishment of this magnitude, than from one less extensive in its character, or limited in its supplies.

## AWARDS AT THE LATE STATE FAIR AND SHOW.

THERE will always be more or less dissatisfaction with the awards of committees at the Agricultural Shows; we have, therefore, repeatedly contended, that all such committees should be instructed to report the reasons in full, which governed them in making their awards, and that these should be published, so that the exhibitors may be fully enlightened thereby.

Among those who demur pretty strongly, at certain decisions, at the late show of the New-York State Agricultural Society, is our friend Mr. W. S. King, of Rhode Island, and he has taken the committees on swine and milch kine to task rather humorously about this matter, in two long columns of the Providence Journal. If we had room to spare, we should like to copy the whole article; but as it is, we must content ourselves with a few spicy paragraphs on the subject of milch cows.

"The decision of the committee on milch cows, &c., has, however, excited more surprise than that of any other.

"We have not met with a solitary person among the many good judges of milch kine upon the ground, who had made selection of the cows which took the three premiums as being superior to others.

"It is very desirable that this committee, in their report should give us, who have considerable capital and considerable pride invested in the breeding of stock, the grounds upon which their decision rested; the points in which the premium cows were superior to all others.

"To prove to all that we do not lightly join issue with this committee, we here state the performance of one cow, (and that, unfortunately, *our cow*,) which was not thought worthy of mention.

"The shorthorn cow, Flora, the property of the writer, was certified to the committee to have given 1,020 quarts of milk in 60 days, and to have averaged sixteen quarts per day for the next thirty days, and to have given nine quarts on the morning of the show, (she gave eight in the evening,) this in her fourth month, and the beast only four years old. A passing injury to one of her teats considerably diminished her yield during the trial. This is equal to over twenty quarts per day, for a cow six years old, or more.

"Old farmers will stare when they learn that Rhode Island had three cows on the ground, that beat this yield so far, that not even a passing word of approval was bestowed upon this, (to us,) uncommonly fine animal.

"As to her frame and color, she had every point for beauty, and every mark of a milker.

"We do not here mention the fine cows of Mr.

Halliday, Mr. Anthony, Mr. Eaton, Mr. Hovey, and others, who were mentioned by many on the ground, however, in connection with premiums, but rest the argument on the single animal specified, to whose performance, as above stated, we had two credible witnesses on the field; for, in our simplicity, we thought the yield, for so young an animal, somewhat marvelous.

"Now we do, in all sincerity and respect, request of this committee a little explanation in their report. There is some error, or misunderstanding, somewhere. We claim to know something about cows, if it be but little; and we cannot easily believe that three cows, in the state can exceed this yield, allowance being made for age. If there are those, we would walk some distance, over some stony roads, to see them, and drink to their owner's and the cow's long life, some molasses and water, tepid.

"We will venture to propose to the owners of the three premium cows, to show this animal against any of those three cows, before three judges to be elected by the parties, for a silver pitcher worth \$50 to be made by Gorham & Thurber, whose display of silver ware, at the show, reflected so much credit upon the state.

"And finally, we beg the committee alluded to herein, to believe that these strictures upon their decisions are made with a view solely to the eliciting of truth and for the general good."

*One thousand and twenty quarts in sixty days!* And from only a four-year old cow, too! Well, friend King, this is not to be deplored, at least, however much the decision of the committee may be; and you have the intense satisfaction of reflecting that you got plenty of milk for your tea and coffee, although you received no premiums. Now this is some consolation, we opine; and then there is the honor of possessing a good milker; and some satisfaction in letting the public know it; so go ahead again, keep moving, and above all, *improving*, and you may have better luck next time.

#### SARATOGA-COUNTY AGRICULTURAL FAIR.

Is a tour recently made through some of the northern counties of this state, I attended several of the county agricultural fairs which were so well managed, and evinced so much spirit of emulation, as well to deserve a notice in your journal.

On the 17th and 18th of September, Saratoga-county Fair was held at Mechanicsville. This exhibition proved to be all that had been anticipated. When such men as Whalen, the president, and Cory, the secretary, have an enterprise of this kind, a failure need not be expected.

As to matters of improvement, this society has abolished the free-admittance system. Until the present year, the fairs have been held in such places as best suited the notions or convenience of the majority. Consequently, they were dependent upon the receipts of membership, and individual donations for sufficient funds to entitle them to the state appropriation.

They have now an enclosure of about four acres, secured by a tight board fence, through which no one can pass except by the gate, and not then, without first paying a shilling.

Visitors to the enclosure were amply remunerated by rambling up and down the well-laid-out grounds, reclining among a profusion of fruits, flowers, &c. In the middle of the ground, they have a permanent two-story building. The centre of the pit was devoted to the exhibition of flowers, which, let me say to the ladies of Saratoga, exceeded anything of the kind that I have ever met with. The designs were noble, reminding the beholder that none but that fairest of all flowers, (woman,) could contrive and complete, of such materials, such splendid temples, birds of Paradise, and more to be admired than anything else, a weeping willow formed of vines and bedecked with nearly 50 varieties of dahlias, and over 160 varieties of flowers of nearly as many colors and sizes. Thus it will be seen that my path has been strewn with flowers. On each side of this department were manufactured articles in great varieties.

The second story was devoted to the exhibition of quilts, counterpanes, and other specimens of needle work, each of which was well represented.

The exhibition of stock was very fair. Durhams, Devons, a cross of both, and some fine native breeds. It is said the best horses exhibited were the Black-Hawk stock, though there were some beautiful breeds of other pedigrees.

The department for farmers' implements was not so full at this, as at some other fairs, of which I shall say something hereafter; yet, sufficiently so to show that Saratoga county will soon be a powerful competitor for her neighbors that are much older in matters of this kind. A railway washing machine, exhibited by Mr. M. P. Coons, attracted much attention. It is said a child ten years old can do the washing of a small family, with the machine; if so, it is what has long been needed, a "helpmeet" for woman. Mr. J. H. Hedley, exhibited a patent bee hive of very curious construction. The only idea I can give you of it, is, a bee hive filled with bee hives. This hive is said to be the best one yet invented. Mr. Hedley also exhibited some specimens of honey made in common glass tumblers, placed in the hives.

This fair, taken all in all, indicated progression. The receipts show an increase of more than 800 per cent.

A. SHERMAN.

TO MEASURE HAY IN STACKS.—"More than twenty years since," says an old farmer, "I copied the following method of measuring hay, from some publication, and having verified its accuracy, I have both bought and sold by it, and believe it may be useful to many farmers, where the means of weighing are not at hand. Multiply the length, breadth, and height into each other, and if the hay is somewhat settled, ten solid yards will make a ton. Clover will take from ten to twelve yards per ton."



## Ladies' Department.

### COMFORT AND COOKERY.

WE have often asked why simple cookery is not made part of the education of the girls brought up in the various schools. We know how easily soldiers and sailors learn cookery, when obliged to take their turn at cooking; and the girls in the schools might be employed in turn in the kitchen of their parents, masters, and mistresses, or their patrons and patronesses.

The services that might be rendered to this class of society, in respect to comfort, temper, health, and economy, by a more general and competent skill in cookery, is hardly to be estimated. Little have the rich an idea of the vexation, the ill-humor, the bad digestion, and waste, that come of those cooks proverbially sent upon this earth by the enemy of mankind, as an offset to heaven's bounty in furnishing good food. What is commonly self-called a plain cook, (plain in the sense in which the term is applied to a woman,) is a cook who spoils food for low wages. She is a cook, not because she knows anything about cookery, but because she prefers the kitchen fire to scrubbing floors, polishing grates, or making beds. A cook who can boil a potato and dress a mutton chop is one in a thousand.

If we could see by the help of an Asmodeus what is going on at the dinner hour of the humbler of the middle class, what a spectacle of discomfort, ill-temper, and consequent ill-conduct it would be! The man quarrels with his wife because there is nothing he can eat, and he often makes up in drink for the deficiencies in the article of food. Liquor is the consolation to the spirits, and the resource to the balked appetite. There is thus not only the direct waste of food and detriment to health, but the further consequent waste of the use of spirits, with its injury to the habits and the health. On the other hand, people who eat well, and drink moderately, have the satisfaction of appetitewith relish, dispensing with the use of stimulants. Good humor, too, and good health follow a good meal; and by a good meal, we mean anything, however simple, well dressed in its way. A rich man may live very expensively and very ill, and a poor one very frugally but very well, if it be his good fortune to have a good cook in his wife or servant; and a ministering angel a good cook is, either in one capacity or the other, not only to those in humble circumstances, but to many above them of the class served by what are self-termed professed cooks, which is too frequently an affair of profession purely, and who are to be distinguished from the plain cooks only in this, that they require much larger wages for spoiling food, and still much more in quantity, and many other articles to boot.

Great, we repeat, would be the benefit both to the subjects of the instruction, and to the public generally, of making cookery a branch of female education; and amongst the prizes

which the bountiful of both sexes are fond of bestowing in the country, we should like to see some offered for the best boiled potato, the best grilled mutton chop, and the best seasoned hotch-potch soup, or broth. In writing of a well-boiled potato, we are aware that we shall incur the contempt of many, for attracting importance to a thing they suppose to be so common; but the fact is, that their contempt arises, as is often the origin of contempt, for their ignorance, there not being one person in ten thousand who has ever seen or tasted the great rarity—a well-boiled potato.—*Condensed from the London Examiner.*

**ANOTTA DYE.**—This beautiful summer color is one of the readiest known to the good housewife; but as there are some who have to make it, we will give them the simple direction. First, be careful to procure the article pure, as it is one very subject to adulteration. Cut it into small pieces and boil it in soft water with an equal weight of pearlash, in a copper boiler, say one pound to four gallons of water. Rinse the articles to be dyed, in clean water, and then dip them in the dye and air them, and then let them boil some time; take out and rinse. The quantity of anotta used must be regulated entirely by the depth of color required. A little experience will soon teach that.

**ELDER-BUD PICKLE.**—The clusters of elder buds just before they expand into blossom, make an excellent pickle of a peculiar, and rather pleasant flavor. Another pickle, much liked by some epicures, is made of the young elder shoots in spring. To prepare them, peel off the outer skin and soak the stalks twelve hours, in weak brine, and then boil them a few seconds in vinegar. Take them out and pack them close in a jar with pepper, ginger, mace, pimento, and pour the vinegar boiling hot over, to fill the jar, and keep hot for a couple of hours; then set away to cool and tie up for use.

**MAKING BRINE.—FOR THE USE OF YOUNG HOUSE-KEEPERS.**—Dissolve four pounds of good salt in each gallon of water. Add a few handfuls of small lumps of rock or other coarse salt to each cwt. of meat, as you pack it, before putting on the brine. This will maintain its strength. If the pieces of meat are small and lean, they will absorb salt enough to be palatable, in three days. You may then take it out, and if the weather is cool, keep it hung in a dry room, or pack it dry in coarse salt.

**JERKED BEEF.**—This is the name given to a plan of preserving meat, much in use in South America, and often practised in the frontier settlements of the United States and Canada, where salt is costly and scarce. All the lean parts of the carcass of beef or venison are cut into fine shreds, and thoroughly dried in the sun; or if the weather proves bad, sometimes by the fire and smoke. When well prepared, they will keep sweet for years.

## Foreign Agricultural News.

By the steamer *America*, we are in receipt of our foreign journals to the 5th of October.

**MARKETS.**—*Cotton* has been continually advancing since our last. *Flour* is 6d. per barrel less. *Grain*, a slight decline. *Tallow*, an advance. *Naval Stores*, *Rice*, and *Tobacco*, improving.

**Extraordinary Fowl.**—Mr. Moorman, of the Ship Tavern, Bristol, has in his possession an extraordinary barndoor fowl, which has laid some enormous eggs, measuring eight inches in length, and six inches and a half in circumference, and weighed four ounces each. The fowl is not larger than the common size. Her extraordinary achievements have excited a good deal of curiosity in the neighborhood.—*Sunday Times*.

**Potatoes from Cuttings.**—Our potatoes from cuttings are still growing vigorously, while those planted in the usual way are diseased. Although no chemist, it is my opinion that a proper quantity of starch is wanting to bring the potato to maturity. From 7 lbs. of potatoes, the produce of whole sets, planted in the usual way, on the sixth of April, I had 1 lb. 3½ oz. of starch. From the same sort raised from cuttings, put in on the fourth of May, the produce was 1 lb. 13½ oz., showing a difference of 9½ oz. I observed, when taking the first water from the pulp, that the one from the former was a very much darker brown than that from the latter, which was a muddy white. I have taken up my white-blossomed kidneys, the produce of tubers from cuttings of 1849. They are all sound; I have obtained 30 bushels off six rods.—*Gardeners' Chronicle*.

**The Great Industrial Exhibition of 1851.**—The London papers contain an engraving of the building now erecting for this, the World's Great Show. It is to be composed, principally, of glass and iron, and will be 1848 feet long, and 408 feet broad, covering 18 acres of ground. The roof will be supported by 3,230 hollow cast-iron pillars, from 14 to 20 feet long, each of which is a water conductor from the peculiar-shaped roof, which is composed of a succession of low ridges of glazed sash, which conduct the falling water into numerous wooden gutters, which discharge through the supporting pillars. The centre of the immense structure is crossed by a transept 108 feet high, enclosing a row of large elm trees that stand in the way, but are too large to be removed, and must not be destroyed. The glass used will weigh 400 tons, and covers 900,000 superficial feet. The roof and south side will be covered with canvass to break the glare of the sun, which would otherwise be intolerable, even in smoky London. Besides the ground, walls, and roof, to exhibit articles upon, there will be a gallery 24 feet wide, nearly a mile in length, which can be increased if necessary. The cost of the building completed, is about \$750,000. The cubic contents of this largest room ever built in the world, will be 33,000,000 feet. It is to be amply ventilated, but what provision is made for warming it, does not appear. The space allotted for exhibition of articles from the United States is 85,000 superficial feet, which, large as it appears, will be found too small. Any information required by those desirous of becoming exhibitors, can be obtained from the Central Committee, at Washington.

**Draining of the Lake of Haarlem.**—Dr. J. V. C. Smith, editor of the Boston Medical Journal, who is now in Europe, in his editorial correspondence, written from Holland, mentions his visit to the Lake of Haarlem, which is now being drained by raising the water by steam engines into a canal, dug to carry it off to the sea.

Six miles from Amsterdam is the inland Lake of Haarlem, 21 miles long by 11 in width, which, three hundred years ago, was found to be perceptibly increasing, by shooting its waters further and further, and covering up the land, threatening the first commercial port of the realm with destruction by flowing in upon its back. Various schemes, at that remote epoch, were devised by able counsellors, to stay the threatening danger. Three Dutch engineers, of acknowledged ability, proposed draining off the water, first raising it by windmills. They are entitled to remembrance from having suggested the very plan adopted by the government, in 1849, for inverting an impending calamity. Seven years since, delay being no longer safe, a canal was dug around the whole circumference of the lake, averaging 200 feet in width, by 10 feet deep.

Three monster steam engines are housed on the side of the lake, some six or eight miles apart, each moving eight monstrous pumps. All the pistons are raised at once, at every revolution of the machinery, elevating 15,000 gallons of water, which is emptied into the canal, whence it is hastened by a fourth engine, faster than it would otherwise move, to the Zuyder Zee, and thus it reaches the sea, 15 miles distant. In April, 1849, the pumps, worked by three of the mightiest steam engines, perhaps, ever constructed, were set in motion; and up to this date, July 25th, 1850, have lowered the contents of the lake seven feet. By next April, it is anticipated that the bottom will be fairly exposed, and all the water conveyed away from its ancient basin.

**Electricity Applied to a Mare in Foal.**—The following is from the "Cambrian" newspaper:—On Saturday morning, week, a mare in foal, belonging to William Chambers, jun., Esq., was electrified at the South-Wales Pottery, Llanelly. Not being able to put the animal into the room where the machine was placed for operating upon her, she was stationed outside, near the doorway, and was brought into contact with the instrument by means of long, and remarkably slight brass chains. The chains being fastened round the fetlocks of the fore legs, the first shock was given, but so slightly as not to be strong enough to kill a mouse, but it started the mare so that she fell completely back on her hunches, at the same time snapping the small chains in pieces. After raising her, and bringing her to the door again, the position of the chains was altered, by being placed so that the shock might pass diagonally through her, and the second shock succeeded much better than the first. It was quite evident that the first had frightened her, for when the charges of the Leyden jar were tried, previous to giving the second shock, she started at the sounds of them. A few weeks ago she had a seton placed on the back bone, near the hind quarters, while all the affection, (ossification at the back of the neck,) lay in the neck, and close upon the base of the skull. This was caused by a kick on the spot where the seton was placed. The poor animal is now much better since she was electrified, as we saw her on Monday, running after a fine colt, a feat she could not have performed on Friday evening; for, till that time, she could not, by herself, get up, if once she dropped. The result has been so far favorable, that we believe it is proposed by the enterprising owner to put her under the same operation a few times more, although some, in attendance on Saturday week, fancied more evil than good might arise from the first operation.

**Potato Culture in Ireland.**—By the late report on the potato crop of Ireland, it appears that the average for the whole of that island gives an increase of potato cultivation, the present year, of 109 per cent., or upwards of double, as compared with 1849.



## Editors' Table.

**TO CORRESPONDENTS.**—Whoever writes us a good article, of a page or more in length, shall be entitled to the *Agriculturist* one year, gratis. All articles required to be inserted in a particular number, should be sent one month in advance.

**THE FAMILY EXPENDITURE DIARY;** Designed for the use of Families and Individuals in keeping correct account of Expenditures. By Rufus Merrill. This is a useful little book, of a convenient form, suitable for families and others, who have not business enough for keeping a regular set of books. It may be had at Van Nostrand & Terrett's, 120 Fulton street, N. Y., at 31 cts.

**THE AMERICAN AGRICULTURIST AND NEW-YORK AGRICULTURAL WAREHOUSE TRAVELLING AGENT.**—Mr. A. Sherman, who has been sometime engaged for us, will soon leave on a tour through the states of Delaware, Maryland, Virginia, and North Carolina, gathering information to increase the value of our paper, and extending its circulation. He will also take orders for implements from our warehouse.

**GRAND EXHIBITION OF POULTRY.**—The New-England Society for the Improvement of Poultry give notice that their grand annual exhibition will take place at the Public Gardens, in Boston, on Tuesday, the 12th day of the present month, where every facility will be rendered to accommodate the public to any extent that may be required.

**SALE OF MR. STICKNEY'S STOCK.**—This sale took place as advertised in our last number, at Westminster, Vermont, and was well attended. Thorough-bred Devons sold for \$125 to \$160. Grade Devons, on an average at \$50 each. The Suffolk swine sold from \$10 to \$80 per head, according to age. The Southdown sheep having been much neglected, sold comparatively low. The whole amount of the stock sales was \$5,176. The Devons brought much higher prices than was ever before obtained at a public sale in this country, for this breed of cattle. Improved stock of all kinds have risen, at least, 50 per cent. within a year.

**SALE OF SHEEP.**—We invite particular attention to the sheep advertised at page 359 of this number of our paper. Col. Sherwood has taken great pains in breeding them, and the public may rely upon their being fully equal to what they are represented. They will be sold without reserve, as advertised.

**CATTLE SHOW AND FAIR OF THE AMERICAN INSTITUTE.**—We have been obliged to go to press before the close of the fair, and shall give particulars in our next number. The cattle show, in some respects, was better than any we have yet seen here. Mr. Stevens' imported Devon cattle and Southdown sheep were justly admired, and far superior to anything of the kind we have yet seen imported, with the exception of a few sheep by Mr. Rotch. The show of Durhams was respectable, of Alderneys and Ayrshires, pretty good. The grade Durham milch cows were numerous, and of a superior order. Mr. Colt's singular-looking Hungarian cattle were present and attracted much attention. Horses, though not numerous, were good. Sheep and swine, a fair representation of each. There were several superior Spanish Jacks, and some mules. Mr. Moore was there with his great Shanghae fowls, both black and buff, and the grey, speckled Chittagongs. Other fowls were good of their kind.

**DE BOW'S REVIEW.**—The October number of this popular and very valuable magazine was laid upon our table by the editor himself, a few days since, upon the occasion of an editorial call, we had the pleasure of receiving from him in our sanctum. To those of

our readers, if there are any such, who are unacquainted with the above work, we will say that it is truly what its title indicates; a "Southern and Western Industrial and Literary Journal of Commerce, Agriculture, Manufactures, Internal Improvements, and Statistics, &c." It is edited with marked ability, published at New Orleans, in a large octavo pamphlet, monthly, at \$5 per annum. It is extensively patronised in all the southern states, and should be much more so. It is indispensable to all who are desirous of keeping pace with commercial information, particularly of the greatest mart of agricultural productions in the world.

**LARGE YIELD OF PUMPKINS.**—Mr. Dennis Brewer, of Monterey, Mass., grew the following pumpkins from one seed. The respective weights were as follows:—

The first weighed 40½ pounds; the second, 40½; the third, 34½; the fourth, 29; the fifth, 17; the sixth, 29½; the seventh, 25½; the eighth, 21½; the ninth, 18½; and the tenth, 7 pounds, making a total of 263 pounds!

**NOTICE OF FAIRS.**—The Fair at Mt. Holly, and the Fair at Tarrytown will be duly noticed in the next number. The articles could not be inserted this month for want of room.

Fair of the American Institute will also be noticed in the December number.

**PLASTER FOR POTATOES.**—The Newburyport Herald states that a West-Newbury farmer planted this season, eight acres of potatoes, manuring six of them with plaster, or gypsum, in the hill, and omitting it on two acres. The six acres have turned out all sound potatoes, while the other two have been entirely destroyed by the rot.

**THE EGG TRADE.**—It is stated by a person engaged in the egg business, that 200,000 dozen of eggs have been sent from Hallowell, Maine, to Boston, in the steamer Ocean, the present season.

**LARGE CATTLE.**—Col. Byron J. Bassel, of Harrison county, Virginia, has purchased three pair of oxen the gross weight of which are as follows:—

One pair, 4 years old, weighed 4,000 lbs.

One pair, 6 years old, weighed 5,000 lbs.

One pair, 6 years old, weighed 5,500 lbs.

These cattle were raised by Mr. Abia Minor, of Harrison county. Col. Bassel will immediately commence grain feeding them, and in the fall, have them fattened for the eastern market.—*Exchange.*

**THE LARGEST GRAPE VINE IN THE UNITED STATES.**—Under this heading, the Natchez Free Trader, of the 10th instant, has the following paragraph:—

Mr. William Casey, corner of Union and State streets, in the city of Natchez, can boast of a grape vine which is, undoubtedly, the monarch vine of the United States. It rises from the ground in a single trunk of some three inches in diameter, nearly straight, and well proportioned, to the height of about nine feet, when it spreads into branches, and covers and embowers the trellis work of quite a large garden, besides climbing a tall tree. The weight of the immense clusters of grapes hanging upon it, now about half grown, is estimated at a ton. To stretch out any one of the branches in a direct line, they would measure from 300 to 400 feet. The grape is not natural to the country, but was brought to Natchez in the old Spanish times. It is called the "Jack Grape," from Spanish Jack, the nickname of the Spaniard who planted it. Some years ago, Madame Bingaman, now dead, offered Mr. Casey \$500 if he would remove the vine safely to her garden, in the environs of the city; but no sum of money whatever, would induce the owner to part with it. It produces a wine which has the taste of Hock.

## Review of the Market.

PRICES CURRENT IN NEW YORK, OCTOBER 16, 1850.

ASHES, Pot. ....	100 lbs.	\$6.12	@	\$6.19
Pearl. ....	do.	6.00	"	6.12
BALE ROPE. ....	lb.	9	"	11
BARK, Quercitron. ....	ton.	38.00	"	41.00
BEANS, White. ....	bushel.	75	"	1.25
BEESSWAX, American, Yellow, ..	lb.	20	"	26
BOLT ROPE. ....	"	10	"	11
BONES, Ground. ....	bushel.	45	"	55
BRISTLES, American. ....	lb.	25	"	65
BUTTER, Table. ....	"	15	"	25
Shipping. ....	"	9	"	15
CANDLES, Mould, Tallow. ....	"	10	"	13
Sperm. ....	"	25	"	50
Stearine. ....	"	25	"	30
CHEESE. ....	"	5	"	10
COAL, Anthracite. ....	2,000 lbs.	6.00	"	6.50
CORDAGE, American. ....	lb.	11	"	13
COTTON. ....	"	12	"	16
COTTON BAGGING, Am. hemp, ..	yard.	15	"	16
FEATHERS. ....	lb.	27	"	35
FLAX, American. ....	"	8	"	9
FLOUR, Sour. ....	bbl.	3.62	"	3.88
Ordinary. ....	"	4.25	"	5.00
Fancy. ....	"	5.25	"	6.75
Buckwheat. ....	"	—	"	—
Rye. ....	"	3.00	"	3.25
GRAIN—Wheat, Western. ....	bushel.	1.00	"	1.20
Red and Mixed. ....	"	80	"	1.00
Rye. ....	"	70	"	71
Corn, Northern. ....	"	63	"	67
Southern. ....	"	59	"	63
Barley. ....	"	75	"	80
Oats. ....	"	39	"	45
GUANO, Peruvian. ....	2,000 lbs.	—	"	60.00
Patagonian. ....	do.	—	"	40.00
HAY, in Bales. ....	100 lbs.	45	"	56
HEMP, Russia, Clean. ....	ton.	200.00	"	205.00
American, Water-rotted. ....	"	160.00	"	200.00
Dew-rotted. ....	"	140.00	"	175.00
HIDES, Southern, Dry. ....	"	9	"	10½
HOPS. ....	lb.	10	"	20
HORNS. ....	100.	2.00	"	10.00
LEAD, Pig. ....	100 lbs.	4.38	"	4.75
Pipes for Pumps, &c. ....	lb.	5	"	7
LARD. ....	lb.	7	"	7½
MEAL, Corn. ....	bbl.	3.00	"	3.37
MOLASSES, New-Orleans. ....	gallon.	23	"	31
MUSTARD, American. ....	lb.	7	"	10
NAVAL STORES—Tar. ....	bbl.	2.00	"	2.38
Pitch. ....	"	1.25	"	1.75
Rosin. ....	"	1.25	"	1.35
Turpentine. ....	"	2.44	"	2.75
Spirits of Turpentine. ....	gallon.	30	"	33
OIL, Linseed, American. ....	"	73	"	77
Castor. ....	"	1.50	"	1.65
Lard. ....	"	60	"	70
OIL CAKE. ....	100 lbs.	1.25	"	1.50
PEAS, Field. ....	bushel.	75	"	1.25
Black-eyed. ....	"	2.00	"	2.25
PLASTER OF PARIS. ....	ton.	2.00	"	2.75
Ground, in Barrels of 300 lbs. ....	"	1.12	"	1.25
PROVISIONS—Beef, Mess. ....	bbl.	7.00	"	10.00
Prime. ....	"	4.50	"	6.00
Smoked. ....	lb.	6	"	12
Rounds, in Pickle. ....	"	4	"	6
Pork, Mess. ....	bbl.	10.00	"	12.00
Prime. ....	"	6.50	"	9.00
Bacon Sides, Smoked. ....	"	3	"	4½
in Pickle. ....	"	3	"	4
Hams, Smoked. ....	"	5	"	9
Pickled. ....	"	4	"	7
Shoulders, Smoked. ....	"	4	"	6
Pickled. ....	"	3	"	5
RICE. ....	100 lbs.	3.25	"	3.75
SALT. ....	sack.	1.25	"	1.60
Common. ....	bushel.	20	"	35
SEEDS—Clover. ....	lb.	6½	"	9
Timothy. ....	bushel.	2.00	"	3.50
Flax, Clean. ....	"	1.60	"	1.65
SODA, Ash, (80 per cent. soda). ....	lb.	3	"	—
Sulphate Soda, Ground. ....	"	1	"	—
SUGAR, New-Orleans. ....	"	5	"	7
SUMACH, American. ....	ton.	35.00	"	37.00
TALLOW. ....	lb.	7	"	8
TOBACCO. ....	"	4	"	13
Eastern, Seed-leaf. ....	"	15	"	20
Florida Wrappers. ....	"	15	"	60
WHISKEY, American. ....	gallon.	25	"	27
WOOLS, Saxony. ....	lb.	40	"	60
Merino. ....	"	35	"	40
Grade Merino. ....	"	30	"	35
Common. ....	"	20	"	32

## NEW-YORK CATTLE MARKET.

At Market 1,800 beef cattle, (900 Southern, the remainder from this State,) 50 Cows and Calves, and 6,000 Sheep and Lambs.

**Beef.**—The demand since our last has been limited. Sales of best retailing qualities at from \$5 to \$7.50,—the trade closing very dull. About 300 head would remain over undisposed of.

**Cows and Calves.**—Sales at from \$22.50 to \$45, as in quality. All taken.

**Sheep and Lambs.**—Sales of Sheep at from \$1.50 to \$3.50. Lambs, \$1.50 a \$3.75. Left over, 150.

**REMARKS.**—Cotton and Tobacco have advanced since our last. Very little alteration in other articles.

**Potatoes** have rotted considerably in different parts of the country, and have consequently advanced in price in those localities. Where the rot is unknown they are cheap and abundant.

**The Weather** continues delightful—indeed we never knew a finer Autumn. No frost yet in this quarter to do injury. Corn is well ripened and a large crop. All roots except potatoes are good crops. Tobacco is much injured particularly in Virginia. The season for picking cotton and making sugar is highly favorable; nevertheless the cotton crop will be decidedly short.

**TO CORRESPONDENTS.**—Communications have been received from L. Durand, A Subscriber, and David Tomlinson.

**ACKNOWLEDGEMENTS.**—Minority Report on the Reduction of Letter, Periodical and Pamphlet Postage; List of Premiums awarded at the late Annual Fair of Columbia-County Agricultural Society; List of Prizes awarded at the Toronto (C. W.) Industrial Exhibition in September last; Premium List of the Queens-County Agricultural Society for 1850; Report of the Secretary of State in answer to a Resolution of the U. S. Senate, respecting the Trade of Guano; Memorial of the Iron Manufacturers of New England, asking a Modification of the Tariff of 1846.

**VALUABLE FARM FOR SALE.**—Will be sold by the subscribers at Public Vendue on Friday the 20th day of December next, at one o'clock P. M. on the premises, the valuable farm lately owned by Caleb Smith Green, deceased, situate in Lawrence Township, Mercer County, New Jersey, on the Old York Road, seven miles from Trenton, four from Princeton and near the Lawrenceville Church, English and Classical Schools and Female Seminary. The farm is well watered and contains 193 acres of land, about 30 of which are Wood, the residue meadow and arable land in a high state of cultivation. Upon the premises is a stone Dwelling House containing 4 rooms on a floor, and two tenant houses for workmen, large and convenient barns for storing hay and grain, corn cribs, carriage house, wood house, tool house, and other out-buildings, all in good repair, 2 Apple orchards, Pear orchard and other fruit trees. Lime and Manure can be unloaded, and grain and produce shipped on the Delaware and Raritan Canal within 2 miles of the farm.

Persons desiring to view the premises can do so by calling at the dwelling house on the farm. For further information apply to Caleb S. Green, in the city of Trenton.

HENRY W. GREEN, } Ex'rs.  
CALEB S. GREEN. } n'ts

**SELLING OFF TO CLOSE THE BUSINESS.** Linnaean Botanic Garden and Nursery, late of William Prince, deceased. Flushing, Long Island, Near New York. WINTER & Co. Proprietors.

The proprietors have still remaining, a very considerable stock and variety of Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c., which they will dispose of for cash, at a reduction of 25 to 50 per cent. and upwards, from the usual prices, according to kind and quantity. Descriptive Catalogues, gratis, on application, post paid.

Apple trees, two to four years old, from \$5 to \$10 per 100. Pear trees, two to four years old, \$25 to \$50 per 100. Cherry trees, two years old, \$12.50 per 100. Orange Quinces, three and a half to five feet, \$12.50 per 100. Black Hamburg and other Foreign Grape Vines, extra strong plants, \$5 per doz. Two-year old seedling Plumb Stocks, \$7 per 1,000.

WINTER & CO.

**NEW-ORLEANS AGRICULTURAL** Warehouse, comprising a large assortment of Plows, Harrows, Cultivators, Fanning Mills, Corn Shellers, Corn and Cob Crushers, Straw Cutters, Ox Shovels, Ox Yokes, Grain Threshers, Corn Mills, Axes, Hoes, Shovels, and other Agricultural Implements. Also, Gardening Tools, Guano, Plaster, Rock Salt, &c. &c. Orders will be executed for every article wanted by Planters.

JOHN T. GEO. W. SIZER, cor. of Magazine and Poydras sts.

**COCHIN-CHINA FOWLS.**—For sale, a few pairs of Cochin-China Fowls, from John J. Taylor's importation, from Shanghai. Price \$5 per pair, delivered in New York. sept. E. BLANCHARD, 123 Fulton st., N. Y.



**THE AMERICAN LIVE-STOCK INSURANCE COMPANY, Vincennes, Indiana.**  
 Charter Unlimited. Granted January 2d, 1850.  
**CAPITAL \$50,000!**

For the Insurance of Horses, Mules, Prize Bulls, Sheep, and Cattle, of every description, against the combined risks of Fire, Water, Accidents, and Disease.

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**THE FARMERS' ENCYCLOPEDIA.**—By C. W. Johnson. Adapted to the United States, by G. Emerson. Philadelphia, 1850. One large octavo volume, 1,173 pages, with numerous plates, exhibiting Live Stock, Improved Implements, etc., etc. This book, which forms a library in itself, contains the latest discoveries and improvements in agriculture, together with information upon all subjects connected with practical farming and rural life.

**OPINIONS OF THE PRESS.**

"We are fully convinced that such an amount of valuable knowledge for farmers, can be found in no other work in so cheap and convenient a form. In fact, no farmer who pretends to be well informed in his profession, should be without this book."—*New Genesee Farmer.*

"An excellent work, fit to be distributed for premiums by Agricultural Societies. How much better, and in better taste than the amount of its cost in money."—*J. S. Skinner.*

For sale by C. M. Saxton, 123 Fulton st., New York, and the principal booksellers in the United States, elegantly and strongly bound, with gilt emblematical designs, making an ornament to the book case, or parlor table. Price \$4. Cost of the imported copy, without any plates, \$14. sept. 3t eom.

**HALLOCK'S NEW VEGETABLE CUTTER**  
 Manufactured at North-East Centre, Dutchess Co. N. Y., by V. H. & N. HALLOCK, and for sale by them and at the principal Agricultural Warehouses in the State.

This machine is very simple in its construction, and capable of cutting by hand power, two bushels a minute, into cubes from three-fourths to one-and-a-half-inch sizes, which enables cattle and sheep to eat them without difficulty. The first premiums on vegetable cutters have been awarded this machine by the New-York State, and Dutchess and Queens-County Societies for 1850.

State or County rights to manufacturers and sell these machines, can be had on applying as above. nlt

**SALE OF MERINO SHEEP.**—I will sell at my Farm, on Wednesday the 20th day of November, at 1 o'clock, P. M., at auction, 40 Merino Rams, and 100 Merino Ewes. These Sheep I have bred from Sheep I purchased of J. N. Blakesly, Esq., of Watertown, Conn. A history of his sheep can be found in the American Agriculturist for 1846, at page 241. At my last shearing, I took off 180 fleeces, 100 of them from breeding Ewes, 60 from shearlings, and the balance from Rams and Wethers. They averaged 4 3/4 lbs. For the quality of the Wool, I give the copy of a letter from H. G. Ellsworth, Esq., Agent of Woolen Manufacturing Co., in this city, to the Editor of the American Agriculturist.

OFFICE OF THE AUBURN WOOLEN COMPANY.

Auburn, N. Y., Oct. 8, 1850.

EDITOR AMERICAN AGRICULTURIST. Dear Sir:—Learning that Col. J. M. Sherwood, of this city, has proposed to sell a portion of his Merino Sheep, I take pleasure in recommending them to the attention of such persons of as may wish to improve their stock of this kind. I have manufactured, in the Mills of this Company, the wool taken from this flock, during the last three years, and find it grades higher and more even, spins better, and is, on the whole, superior to any lot of Merino wool I have met with.

H. G. ELLSWORTH, Agent.

The Rams will be put up at ten dollars each. The Ewes will be sold in lots of five, and will be put up at five dollars for each Ewe. If these prices are not offered they will remain mine. Terms—Cash at the sale. J. M. SHERWOOD. nlt.

Auburn, N. Y.

**A PRACTICAL TREATISE** on the Cultivation of the Grape Vine on open walls, with a descriptive account of an improved method of planting and managing the roots of Grape Vines. By Clement Hoare. To which is added an appendix, containing remarks on the culture of the Grape Vine in the United States. Price, Cloth 50 cents. Paper covers 38 cents. Nov. Published by C. M. SAXTON.

**PURE WHITE DORKINGS.**—For sale, fifteen pair of Pure-White Dorking Fowls, descendants of Dr. Wight's importation. Price, including coops and delivered in New York, \$6 per pair. E. BLANCHARD, 123 Fulton st., N. Y. nov.

**A NEW HARDY CLIMBER.**—The new and beautiful Climber, *Calestigia pubescens*, recently introduced from China by Mr. Fortune, proves perfectly hardy in New England, having stood in the grounds here the past winter, without the least protection. Trained to a single pillar, say ten feet in height, it is a very striking and beautiful object, from the middle of June to cold weather, during which time it is covered with a profusion of its large double flowers, of a delicate rose color. It is very ornamental, planted in patches, like the verbenas; makes an admirable screen, and is very effective in young plantations, belts, or shrubberies, trailing prettily on the surface, and running up among the lower branches of trees in a very picturesque manner. It is, therefore, particularly suited for ornamenting Cemeteries and Public Gardens. Its culture is very simple, and it thrives in any good garden soil. When required in considerable quantities, it is best to start them under glass in February or March, but the tubers may also be planted in the open ground in May. The subscriber will send to order, by mail or express, October 20th, tubers sufficient for 100 plants at \$5; for 50 plants, \$3; with directions for propagation and culture. Strong plants in pots in April, \$1 per pair.

R. M. WATSON.

Old-Colony Nurseries, Plymouth, Mass., Sept. 1st, 1850. o 2t

**LATEST AND BEST** collection of Church Music now ready. The Golden Lyre; a new collection of Church Music, adapted to the various metres now in use, together with a great variety of new Anthems, Sentences, and Chants, for choirs, singing classes, musical associations, and social sacred music circles, by V. C. TAYLOR, author of "Taylor's Sacred Minstrel," "Choral Anthems," &c.

"We have explored its contents enough to dare speak well of it. Mr. Taylor is, himself, the author of a good part of the book, and he shows musical feeling, taste, and invention, which make it no presumption in him to appear as a composer. \* \* \* Mr. Taylor's pieces are recommended by their melody woven into all the four parts by their expressiveness, which always varies with the subject, and by their uniformly artistic style. \* \* \* And last, but not least, the work is more beautifully and clearly printed than any which we remember of the kind."—*N. Y. Tribune.*

"We believe the book to be greatly superior to any that has preceded it, and we think it may claim to be better adapted to, and more suitable for, the use of choirs."—*Saron's Musical Times.*

"In the selection of poetry also, Mr. Taylor manifests an exquisite taste for that which is beautiful as well as devotional, and in giving it appropriate musical expression, he shows a power of conception, and a knowledge of harmonic effect, which entitle him to rank among the first, if not at the head of American composers."—*N. Y. Baptist Register.*

"We have examined this new collection of church music, and would add our favorable opinion of its merits, to the many eulogiums it has elicited."—*New-York Evangelist.*

"We hope this collection will meet that favor and success of which it is so deserving."—*New-York Recorder.*

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For sale by booksellers generally.

nlt

**GREENHOUSE PLANTS, VINES AND** Roses. Parsons & Co. offer for sale every desirable variety of Greenhouse Plants, and many valuable novelties recently introduced from Europe. Attention is particularly directed to their fine stock of *Camellia wilderii*, the perfection of whose form is not attained by any other variety. The original stock, both of this and C. Abbey Wilder, is in their possession.

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50 cents for those one year old.

75 " " two years old.

\$1.60 " " of extra size.

Their stock of saleable roses includes some thousands on their own roots of the Remoutant, Bourbon, China and Garden Roses, in their various sub-classes. Catalogues furnished gratis on application to Flushing, near N. Y. PARSONS & Co. o

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**GUANO AND OTHER FERTILISERS**, constantly on hand and for sale on reasonable terms.

GUANO—Genuine Peruvian of the best quality.

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**HIGHLY IMPROVED FORCING PUMP** and Garden and Fire Engine, a better and cheaper article than ever before offered in the New-York or any other market, to be sold in any quantity.

**NEW AND HIGHLY IMPROVED LACTOMETERS.**—We have just got up a new article of cream gauge, far better and more accurate than any heretofore made. Price \$5, with a liberal discount to dealers.

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**VEGETABLE BOILERS**, used for boiling food for stock, holding from 15 to 120 gallons.

**PREMIUM FANNING MILLS.**—These machines considering the simplicity of their construction and efficiency of all their operations are the best in use.

**SAUSAGE CUTTERS AND STUFFERS.**—These will save nine tenths of the labor in cutting sausage, or other mince meat.

**EAGLE PLOWS.**—Many plows having been sold under the name of the *Eagle Plow*, which are not genuine, this is to give notice that all plows sold in this city under that name, to ensure confidence, will have our name marked on the beam, and no others purchased here can be relied on as genuine without this brand.

Be particular, also, as to the name, number, and street, which should be

A. B. ALLEN & CO., 189 and 191, Water st., New York.

**BRICK MACHINES** of the best construction, will make 10,000 to 15,000 bricks per day by hand.

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**MACHINES** for rasping the Mandioca, or Brazilian arrow root; the Curcuma angustifolia, or East India arrow root; the Cynas circinalis; the Zamia pumila of Florida; Maranta arundinacea, or common arrow root plant of the West Indies; and the yuca, or cassava plant of Cuba; potatoes, &c. &c.; from some or all of which sago, arrow root, tapioca, and starch are made.

**ALLEN'S IMPROVED PORTABLE RAIL-ROAD Horse Power, Thresher, and Separator.**—The advantages of the above horse powers are—1. They occupy but little more space than a horse. 2. They can be moved by the weight of the horse only, by placing the machine at an angle of 10 or 15 degrees. 3. They are easily transported, simply constructed, not liable to get out of order, and move with little friction.

The *Overshot Threshers* consist of a small-spiked cylinder with a concave top, and possess these advantages. 1. They have a level table for feeding, thus enabling the tenders to stand erect, and control the motions of the horse and machine by means of a brake, by which accidents are avoided. 2. In consequence of the spikes lifting the straw and doing the work on the top, stones, blocks, &c., drop at the end of the table, and are not carried between the spikes. 3. The overshot cylinder does not scatter the grain but throws it within three feet of the machine. 4. This arrangement also admits of attaching a separator high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is long, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary threshers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder is fully made up by an increased number in the concave top, which is stationary. 7. The separator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men with a single power, can thresh 100 to 150 bushels of wheat or rye per day; and four men with a double power, twice that quantity. All the above are compact and can be carried where wanted, complete, or they may be readily taken apart and packed for distant transportation by wagon or otherwise.

Price of single Power,	\$80
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**FRENCH MERINO BUCK.**—A very large and superior Merino Buck for sale, bred from the late importation from France by Mr. Taintor of Connecticut. He is two years old, and shears an uncommonly large and fair fleece. Price \$150.

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